STUDY PACK

ON

INTRODUCTION TO FINANCIAL AND MANAGEMENT ACCOUNTING

FOUNDATION

INTRODUCTION TO FINANCIAL AND MANAGEMENT ACCOUNTING

FOUNDATION

FOURTH EDITION

CHARTERED INSTITUTE OF PERSONNEL MANAGEMENT OF NIGERIA

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FOREWORD

This fourth edition of the CIPM study pack is one of the learning resources recommended to persons preparing for certification through professional examinations. It is uniquely prepared to meet the knowledge standards of HR certification bodies and/or degree awarding institutions. The study pack is highly recommended to researchers, people managers and organisations responsible for human capital development in its entirety.

Each chapter in the text has been logically arranged to sufficiently cover all the various sections of this subject as itemised in the CIPM examination syllabus. This is to enhance systematic learning and understanding of the users. The document, a product of in-depth study and research, is practical and original. We have ensured that topics and sub-topics are based on the syllabus and on contemporary HR best practices.

Although concerted effort has been made to ensure that the text is up to date in matters relating to theories and practices of contemporary issues in HR, nevertheless, we advise and encourage students to complement the study text with other study materials recommended in the syllabus. This is to ensure total coverage of the elastic scope and dynamics of the HR profession.

Thank you and do have a productive preparation as you navigate through the process of becoming a seasoned Human Resources Management professional.

Olusegun Mojeed, FCIPM, fnli
President & Chairman of the Governing Council

ACKNOWLEDGEMENTS

On behalf of the President and Chairman of the Governing Council, Mr Olusegun Mojeed, FCIPM, fnli and the entire membership of the Chartered Institute of Personnel Management of Nigeria (CIPM), we acknowledge the intellectual prowess of Mr. Olayiwola Lateef Raheed, ACA in writing this well-researched text for Introduction to Financial and Management Accounting. The meticulous work of our reviewer, Dr Sharlywest Uwabor Eboigbe, FCA, has not gone unnoticed and is hereby acknowledged for the thorough review of this publication.

We also commend and appreciate the efforts of members of the Education Committee of the Institute, under the chairmanship of Mr. Henry Onukwuba, MCIPM for their unflinching support.

Finally, my appreciation goes to my internal project team, led by the Director, Professional Standards and Development, Mr. Gbenga Samuel Odetunde ACIPM, the Team lead, Certification and Licensing, Mr. Samuel Eviewho, ACIPM and Team lead, Professional Examination, Mr. Yinka Oyedere, MCIPM for making this project a success.

Oluwatoyin Naiwo, FCIPM

Registrar/Chief Executive

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SECTION A

CHAPTER ONE

INTRODUCTION TO ACCOUNTING

1.0 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The meaning of accounting;
ii. Purpose and importance of accounting;
iii. Branches of accounting;
iv. Types and classification account;
v. The need for accounting; and
vi. The various users of accounting information.

1.2 Introduction

Accounting is concerned basically with 'accountability'. The underlying purpose of accounting is to provide financial information about an economic entity. The information is provided, periodically, to shareholders and others connected with the organisation to enable them to decide the extent to which they want to continue to associate with the organisation. The need for accounting is more pronounced in a. business where a lot of finance, risk, and energy have been involved. Financial information is needed to plan and control the finances and operations of a business.

1.3 The Historical Development of Accounting

Rudimentary form of accounting started with bookkeeping by *Lucia Pacioli* an Italian monk. In his book titled *"Summa de Arithmetical Geometrica, proportion et proportionslita"* published in. 1494 on Arithmetic, Geometry and Proportion, he devoted a chapter to expound the principles of the double-entry system. It became' necessary for managers to report to the owners of their business activities during the period under review. Such a report would include the following:

i. How the financial resources of the business have been invested during the period

ii. The profit earned or loss incurred during the period

The assets, liabilities and the owner's equity at the end of the period under review. After this initial development, a lot of changes have been witnessed in accounting. These changes were informed by the sophistication and complexity of businesses and industrial and political environments which placed more responsibilities on the management of businesses to disclose more information to owners and other interested parties. For instance, a lot of Generally Accepted Accounting Principles (GAAP) have been developed to be followed in the preparation of financial statements. Also, accounts have to be 'audited' and reported on as presenting a 'true and fair' position. Accounting has also gone beyond mere reporting for managerial decisions, to include tax management, government accounting and social responsibility accounting. The GAAPs are developed from time to time to keep pace with changes in the economic and political environment. The GAAPs are also codified into what is known as Accounting Standards. Therefore, Accounting is not a fixed set of rules but a constantly evolving body of knowledge. Most countries have their own Local Accounting Standards Board but the body responsible for developing and issuing International Accounting Standards is the International Accounting Standards Board (lASB) based in the United Kingdom. In Nigeria, the then Nigerian Accounting Standards Board (NASB) now the Financial Reporting Council of Nigeria (FRCN) is charged with the responsibility of developing and issuing local' accounting standards for use by all preparers and users of financial statements in Nigeria. Accounting has also changed from manual records alone; it now also makes use of computer and video displays.

1.4 Accounting Defined

Broadly speaking accounting is the art of recording, classifying and summarizing in an orderly manner and monetary terms, transactions and events which are of financial character and subsequently interpreting the ensuing quantitative information for business decision purposes.

1.5 The Purpose of Accounting

Accounting is the art of recording classifying, summarizing and analysing financial transactions of a business.

1.6 Scope of Accounting

The starting point in the study of accounting is financial accounting; others are cost accounting, management accounting, auditing, government accounting, and tax management.

1.7 Importance of Accounting

The need for accounting information can be summarised as follows:

i. It provides information useful for making economic decisions.
ii. It provides information to users for predicting, comparing and evaluating the earnings power and financial strength of a business.
iii. It is used to judge the ability of management to utilise the entity's resources effectively in achieving the goal of the entity.
iv. It provides information to creditors for predicting and evaluating the cash flows of the entity.
v. It provides management with detailed accounting data for use in planning and controlling the daily operations of the business.
vi. It provides information to the government for determining the tax payable on the profit and/or other incomes of an individual or company and for formulating fiscal policies.
vii. It forms the basis of reporting on the activities of an enterprise as they affect the society.
viii. It serves as the basic instrument by which investors decide the securities in which to invest.

1.8 Users and their Information Needs

Users of accounting information consist of investors, employees, lenders, suppliers and other trade creditors, customers, government and their agencies and the public. Their needs are as follows.

Users	**Purpose**	**Information Needed**
1. Investors	1. To help decide between buying or selling shares 2. taking up a rights issue and voting	1. Profitability level 2. Level of dividend, past, present and future and any changes in share price.

2. Employees	1. For prospective employees to know the risk involved in taking up a job. 2. For the existing employees to the fairness of perks.	1. Profitability 2. Liquidity 3. Security of employment
3. Lenders (including Bankers)	1. To decide whether more facilities can be granted.	1. Liquidity 2. Interest coverage 3. Ratio of debts to equity 4. Whether to lend to a company or not.
4. Suppliers	Need to know whether the company will be a good customer and pay its debts	1. Liquidity 2. Solvency
5. Customers	Need to know whether the company will be able to continue producing and supplying goods	1. Integrity 2. Liquidity
6. Government	To formulate policies	Details of revenue and expenditures
7. Public	Business decision	General purpose accounting information which was specifically designed for the needs of the public
8. Tax Authorities	To determine the tax liabilities of the company	Details of revenue and expenditure

9. Auditors	To form an opinion on the company's state of affairs	Details of revenue and expenditure.

1.9 Characteristics of financial Accounting

The two fundamental qualitative characteristics of financial accounting are;

a. Relevance, and
b. Faithful representation.

The four enhancing qualitative characteristics are;

1. Comparability
2. Verifiability
3. Timeliness
4. Understandability

Fundamental Qualitative Characteristics

i. **Relevance**: The characteristic of relevance implies that the information should have predictive and confirmatory value for users in making and evaluating economic decisions. The relevance of information is affected by its nature and materiality.

ii. **Faithful Representation**: This means that financial accounting should be prepared and presented to represent or reflect authenticity or truly the financial transactions that occurred during the reporting period. to be useful, financial accounting must not only represent relevant phenomena but must faithfully represent the phenomena that it purports to represent.

The four Enhancing Qualitative Characteristics are:

a. Comparability: This is the ability to compare financial statements of one accounting period to another for users to derive meaningful conclusions about the trends in an entity's financial performance and position over time.

b. **Verifiability**: The characteristic of verifiability assures that the information faithfully represents what it purports to be representing.
c. **Timeliness**: This characteristic simply means that the financial accounting information is available to all stakeholders in time for decision-making purposes.
d. **Understandability**: The characteristic of understandability implies that preparers of information have classified, characterised and presented the information clearly and concisely. Financial accounting is prepared with the assumption that its users have 'reasonable knowledge' of the business and its economic activities.

1.10 Contents of Financial Accounting Report

The contents of the financial accounting report include:

i. Statement of financial position reflecting the financial standing as per the date of the financial accounting report.
ii. Statement of Profit or Loss and other comprehensive income for the reporting period. This describes the formation of the operating results.
iii. Statement of cash flows for the reporting period
iv. Statement of changes in equity
v. Accounting policies and explanatory notes.

1.11 Types and Classification of Account

There are two broad classifications of accounts. There are Personal and Impersonal Accounts.

a. Personal

Personal accounts are the accounts of persons, natural or corporate, who have business dealings with the organisation. The personal accounts comprise Receivables accounts, Payables accounts, Capital accounts, Drawings accounts and Bank.

b. Impersonal

Impersonal accounts are the accounts of non-persons. Impersonal accounts are further sub-divided into real accounts and nominal accounts.

Real accounts relate to tangible assets such as buildings, motor vehicles, furniture and fittings, and inventory. Nominal accounts relate to revenue/incomes, expenses and intangible assets.

1.12 Branches of Accounting

The world of accounting expanded into several branches that specialise in particular legal areas or focus on a certain aspect of business. The following are the branches of accounting:

a. Financial accounting
b. Management accounting
c. Tax accounting
d. International accounting
e. Public Sector accounting
f. Cost accounting
g. Auditing
h. Fiduciary accounting
i. Project accounting
j. Forensic accounting
k. Fund accounting

1.13 Definitions of Management Accounting

i. From the Conceptual View:

Management Accounting is the provision and use of accounting information to managers within the organisations, to provide them with the basis to make informed business decisions that will allow them to be better equipped in their management and control functions.

ii. In Accordance with CIMA Terminology:

Management Accounting is the process of the identification, measurement, accumulation, analysis, preparation, interpretation and communication of information used by management to plan, evaluate and control within an entity and to ensure appropriate use of and accountability for its resources. Management accounting also comprises the preparation of financial reports for non-management groups such as shareholders, creditors, regulatory agencies and tax authorities.

iii. In Accordance with ICMA:

A management accountant applies his or her professional knowledge and skill in the preparation and presentation of financial and other decision-oriented information in such a way as to assist management in the formulation in such a way as to assist management in the formulation of policies and the planning and control of the operation of the undertaking.

1.14 Users of Management Accounting

The primary users of management accounting are:

a. Managers
b. Investors
c. Accountants
d. Executives

1.14 Characteristics of Management Accounting

i. **Provision of Financial Information:** This simply represents the primary goal of management accounting where financial data are delivered to the management. The data is presented in a format that allows various levels of management to review policies and make decisions.

ii. **Cause and Effects Analysis:** Financial accounting is limited to the display of profit or loss account and the financial position of the organisation. The cause and effect of the facts and numbers on which management accounting is based are examined. If there are losses, the causes of the losses are examined, and if there are profits the variables that influence the profits are examined well.

iii. **Use of Special Techniques and Concepts:** Standard costing, budgetary control, marginal costing, ratio analysis and other techniques are used in management accounting to make data more usable and beneficial to management.

iv. **Decision Making**: The primary goal of management accounting is to offer relevant data to management for them to make important decisions. Historical data serves as a function for predicting future impacts, developing alternatives, and making decisions about which course of action is the most advantageous.

1.16 Differences between Financial Accounting and Management Accounting

S/N	BASIS OF DISTINCTION	FINANCIAL ACCOUNTING	MANAGEMENT ACCOUNTING
1	Objective	Its objective is to provide information about the financial performance and financial position of the business to external users like shareholders, and govt. agencies etc	Its objective is to provide information to the internal user (i.e., management) for managerial decision-making.
2	Emphasis – Reporting/control	Its emphasis is on reporting and not on control	Its emphasis is on planning, controlling and decision-making
3	Legal Requirements	It is compulsory	It is optional
4	Information historical/projected	It presents only historical	It presents both historical and projected information for future decision-making
5	Monetary/Non-monetary information	It presents only monetary information	It presents both monetary and non-monetary information

6	Accounting principles/standard	It is governed by IFRS	It is not governed by IFRS
7	Frequency of report	It presents generally annual reports i.e., 12 calendar months	It presents daily, weekly, monthly, quarterly etc reports as per the needs of management
8	Coverage of report	Financial accounting reports relate to the entire organisation	Management accounting reports relate to various segments of the organisation i.e., department, division, product, function etc
9	Accuracy vs. timeliness reports	Its emphasis is on accuracy	Its emphasis is on prompt and timely reporting even if less accurate
10	General vs. Special purpose reports	It generates general purpose reports like income statement, Cashflow statement, statement of financial position	It generates special-purpose reports e.g., performance reports of sales managers, production managers etc.
11	Publication and Audit	Financial statements are published for the general public and sent to shareholders and are required to be audited by chartered accountants	Management accounting statements are neither published nor required to be audited by chartered accountants
12	Use of other disciplines	It does not make use of other disciplines	It makes use of other disciplines like statistics, operation research etc.

1.17 imilarities between Financial Accounting and Management Accounting

a. They co-exist to provide accounting information to the users
b. Both accounting types will be responsible for generating financial reports

c. One can measure and determine the costs for various accounting periods, departments, and sections in both accounting types.
d. Both collect and categorise accounting data to prepare financial reports
e. Both systems utilise the same accounting concepts and practices for cost accumulation and cost allocation.
f. Both practices require education and expertise in basic accounting

1.18 Development of Management Accounting Reports

In the early 20^{th} century, management accounting was created with Taylor's theory of scientific management. Management accounting is a continuous improvement process that provides value-added value, design, measure and manage financial and non-financial information systems for enterprises. This process directs the management actions, motivates behaviour, and supports and creates cultural values, which are needed to achieve organisational strategy, tactics and business objectives. The research and application of management accounting in China started late. It started in the late 1970s and early 1980s. During about 30 years, management accounting has made great progress in both theory and practice. Many facts have proved that China's management accounting has gradually shifted from quantity and quota management to management of cost and value, and from project and department management to comprehensive and strategic management. In recent years, with the implementation of fiscal policies such as department budgets, investment review and performance appraisal, "comprehensive budgets," "zero-base budgets," "budget control," "responsibility assessment" and other modern management accounting theories and methods have been applied in various enterprises in China. However, the time that management accounting is formed and developed in China is not long after all. There are many defects and deficiencies in China's management accounting. The theoretical structure, scope of research and practical application of management accounting are to be improved and enriched, and there is still considerable space for development. The problem is more serious in small and medium-sized enterprises. This paper studies the current development status of management accounting in small and medium-sized enterprises and factors that affect management accounting in small and medium-sized enterprises, then proposes solutions to meet the development needs of management accounting in small and medium-sized enterprises.

1.19 Importance of Management and Financial Accounting to Human Resource Practice.

Human resources departments can use accounting skills to track their expenses and estimate the profits they generate through quality hiring and team management. For example, a human resources professional may use accounting skills to determine how a high retention rate benefits the organisation's profits and revenue. Management and Financial accounting play a series of important roles in human resources such as:

i. Helps to Improve the Accuracy of Decision.
ii. Effectively Realise the Optimal Allocation of Human Resources.
iii. Mobilise Employees' Initiative and Enthusiasm.
iv. The Application of Accounting in Human Resources Management
v. The Application of Accounting in Recruitment and Selection.
vi. The Application of Accounting in Employee Training and Development.
vii. Application of Accounting in Employee Allocation, Arrangement and Turnover.
viii. Application of Accounting in Human Resource Reset
ix. Application of Accounting in Employee Salary Design.

Revision Questions

Multiple Choice Questions

1. __________ is a specialised branch of accounting that keeps track of a company's financial transactions.
   (a)Cost accounting (b) Management accounting (c)Financial Accounting (d)Corporate accounting
2. Financial accountancy is governed by ___________
   (a)local standards only (b)international standards (c)local as well as international accounting standards (d)company's internal top management only
3. Which is not a benefit of financial accounting?
   (a)Maintaining systematic records (b)Protecting and safeguarding business assets (c)Historical in nature (d)Facilitates rational decision-making
4. Which is not a limitation of financial accounting?
   (a)Inadequate information to fix up the price of products manufactured (b)Lack of data for comparison of cost of operation of the firm with other firms in the industry (c)The data available is historical in nature (d)Complies with the various legal requirements
5. _________ are the basis of the business's financial accounting.
   (a)Accounting records (b) Bookkeeping (c) Sales Volume (d) Both A & B
6. Financial accounting provides accounting information to the ________ though the information is useful for internal purposes also
   (a)external users (b) internal users (c)company (d) competitors
7. Financial accounting reports to the ________ after the completion of the accounting year.
   (a) internal management (b) external parties (c)Media (d)rivals
8. Financial accounting reports include _____
   (a)profit or loss account (b)directors report (c)statement of financial position and auditors report (d) all of the above
9. Financial accounting covers the overall performance of the _______
   (a)Competitors (b)Market (c)Company (d)Finance department
10. Financial accounting reports lay greater emphasis on the _______ of data
    (a)objectivity (b) Flexibility (c) Relevancy (d)Subjectivity

Solutions

1	2	3	4	5	6	7	8	9	10
C	C	C	D	D	A	B	D	C	A

Theory Questions

1. Differentiate between Accounting and Bookkeeping
2. (a) Explain the term "Accounting Information"

   (b) Who are the users of accounting information?
3. What are the qualities of good accounting information?
4. State the functions expected of an accounting department in an organisation.
5. Financial information preparation and presentation are shaped by the information needs of management only. Discuss.

CHAPTER TWO

INTERNATIONAL FINANCIAL REPORTING STANDARDS: CONCEPTUAL FRAMEWORK

2.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The changes in global accounting standards;
ii. The regulatory rules guiding accounting globally; and
iii. How to prepare a simple financial statement.

2.2 Introduction

Like any other profession, the accounting profession is practised within a framework of statutory and regulatory pronouncements. This is necessary to ensure orderliness, consistency and uniformity in the practice of the profession.

2.3 Statutory Framework

The statutory framework comprises the statutes enacted by the government to govern the conduct of economic activities, the main one for which this is carried out is the Comprises and Allied Matters Act (C.A.M.A) 2020. This statute stipulates the requirements for the formation/registration of companies, how companies are to conduct their affairs, the type of accounting records and financial statements required of companies, how the life of companies may be brought to an end and so on.

In addition to the C.A.M.A. 2020, other statutes have been enacted by the government to govern economic activities in specialised areas of the Nigerian economy. These include the following:

a. Enabling statutes establishing government parastatals like Nigerian Ports Plc, National Electric Power Authority, Nigeria Airways and so on.
b. Statutes regulating the banking/financial sector. These statutes are:
    i. Banks and Other Financial Institutions Act (BOFIA) 1991
    ii. Central Bank of Nigeria Act 1991
    iii. Nigeria Deposit Insurance Corporation Act 1988

iv. Money Laundering Act 1995

c. Statute regulating the insurance sector: Insurance Act 1997

2.4 Regulatory Framework

This consists of the non-statutory statements, circulars and pronouncements which are expected to be complied with in the conduct and recording of economic activities. They include accounting standards and Central Bank of Nigeria (CBN) Monetary Policy Circulars.

2.5 Accounting Standards

An accounting standard is a statement issued by the appropriate standard-setting body locally or internationally on a specific area or topic in financial accounting/reporting, the acceptance/application of which is mandatory for preparers and users of financial statements.

Accounting standards are issued at the international level by the International Accounting Standards Board (IASB) - formerly the International Accounting Standards Committee (IASC) - while they were issued in Nigeria by the Nigerian Accounting Standards Board (NASB) which later transformed into Financial Reporting Council (FRC). The standards issued by the IASB are known as International Financial Reporting Standards (IFRS). Those issued by the defunct IASC were known as International Accounting Standards (IAS) but all of the IASs that were still valid as of the date the new IASB took off in 2001 were adopted by the new body. The standards issued by the then NASB were known as Statements of Accounting Standards (SAS).

2.6 History of International Accounting Standards Board

The IASC, the precursor of the IASB, was established in 1973, the IASB was established as an independent, and private sector body lo set acceptable and applicable standards for the preparers and users of financial statements around the world.

During the period from 1997 – 1999, a restructuring program was implemented which resulted in the cessation of the operations of the old IASC on 31st March 2001 and its replacement by a new body. IASC foundation (now known as IFRS Foundation) based in the USA and hereinafter referred to as The Foundation, with effect from 1st April 2001. A separate organ, the International

Accounting Standards Board (IASB), supervised and governed by The Foundation, was established and saddled with the responsibility of developing and issuing IFRS.

The objectives of the foundation, quoting from its revised constitution approved in January 2013, are to;

a. develop, in the public interest, a single set of high-quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles. These standards should require high-quality, transparent and comparable information in financial statements and other financial reporting to help investors, other participants in the world's capital markets and other users of financial information make economic decisions
b. promote the use and rigorous application of those standards
c. take account of, as appropriate, the needs of a range of sizes and types of entities in diverse economic settings
d. promote and facilitate the adoption of International Financial Reporting Standards (IFRSs), being the standards and interpretations issued by the IASB, through the convergence of national accounting standards and IFRSs.

From inception, the IASB decided to adopt all the standards previously issued by its predecessor, which form part of IFRSs but would continue to be known as International Accounting Standards (IAS). These standards-and, indeed, all other IFRSs subsequently issued by the IASB — could be reviewed, revised, reformatted, withdrawn or replaced as and when the need arises.

2.7 Structure of the Foundation

The activities of The Foundation and, by implication, the IASB are overseen and directed by The Trustees who, according to the website of The Foundation, *are also responsible for safeguarding the independence of the IASB band ensuring the financing of the organisation.*

The Trustees

Currently numbering 22, The Trustees are appointed for a renewable term of 3 years. The pioneer chairman of The Trustees was Paul A. Volcker, a former chairman of the US Federal Reserve Board and the current chairman is Michel Prada, from France and, among others, a former chairman of the Executive and Technical Committees of the International Organisations of Securities Commissions (IOSCO).

The distribution of the membership of the trustees is as follows:

Asia/Oceania	-	6 members
Europe	-	6 members
North America	-	6 members
Africa	-	1 member
South America	-	1 member
Rest of the World	-	2 members
Total	-	22 members

The specific responsibilities of The Trustee include, but are not limited to:

i. appointing members of the board of IASB
ii. appointing members of the IFRS Interpretations Committee (IIC)
iii. appointing members of the IFRS Advisory Council (IAC)
iv. establishing and amending the operating procedures, consultative arrangements and due process of IASB, IIC and IAC
v. review the strategy of the IASB annually
vi. ensuring the financing of The Foundation and approving its annual budget.

The IASB

As already slated, the responsibility for developing and issuing IFRSs is vested in the IASB, based in the UK. The pioneer chairman of the IASB was Sir David Tweedie between 1990-2000, he was the former chairman of the UK Accounting Standards Board and 2011-2021 under the chairmanship of Hans Hooger vorst, a former Minister of Finance from the Netherlands and, currently Dr **Andreas Barckow** a German. He took over the headship in 2021. The following paragraph, in *italics*, is lifted from the website of The Foundation:

The IASB is the independent standard-setting body of the IFRS Foundation. Its members (currently 16 full-time members) are responsible for the development and publication of IFRSs including the IFRS for SMEs and for approving Interpretations of IFRSs as developed by the IFRS Interpretations Committee (formerly called the IFRIC). All meetings of the IASB are held in public and webcast. In fulfilling its standard-setting duties the IASB follows a thorough, open and transparent due process of which the publication of consultative documents, such as discussion papers and exposure drafts, for public comment, is an important component. The IASB engages closely with stakeholders around the world, including investors, analysts, regulators, business leaders, accounting standard-setters and the accountancy profession.

Other important organs of The Foundation are the IFRS Interpretations Committee and the IFRS Advisory Council.

2.8 The IFRS Interpretations Committee (IIC)

These committees review on a timely basis accounting issues that are likely to receive divergent or unacceptable treatment if proper guidelines are not put in place in the form of an IFRS. It also develops interpretations of standards issued by the IASB. Such interpretations are published after being approved by the IASB.

Formed in 1997 as the Standards Interpretations Committee (SIC) of the defunct IASC, it has gone through a metamorphosis to its current name. The committee also reviews emerging issues relating to existing IFRS, which were not considered when the standards were developed, to develop modifications to the existing IFRS. The IIC currently consist of one non-voting chairman - currently. Mr. Wayne Upton, an International Director with the IASB) 14 voting members.

2.9 The IFRS Advisory Council (IAC)

The IAC consists of over 30 members and is currently chaired by Mr. Paul Cherry, a Canadian consultant. The IAC provides a forum for organisations and individuals with an interest in international financial reporting to participate in the standard-setting process. The IAC shall be consulted by the IASB on proposed standard-setting projects and by The Trustees on proposed changes to the IASB constitution. The council is thus able to make inputs into the development of IFRSs and review of the operations of the IASB. The website of The Foundation gives the following information regarding the IFRS Advisory Council - quoted here in four paragraphs of *italic* text:

The IFRS Advisory Council is the formal advisory body to the IASB and the Trustees of the IFRS Foundation. It consists of a wide range of representatives from groups that are affected by and interested in the IASB's work. These include investors, financial analysts and other users of financial statements, as well as preparers, academics, auditors, regulators, professional accounting bodies and standard setters. Members of the Advisory Council are appointed by the Trustees.

The Advisory Council also provides advice on single projects with a particular emphasis on practical application and implementation issues, including matters relating to existing standards that may warrant consideration by the IFRS Interpretations Committee.

The Advisor Council serves as a sounding board for the IASB and can be used to gather views that supplement the normal consultative process.

If the IASB ultimately takes a position on a particular issue that differs from a polled expression of the Advisory Council, the IASB gives the Advisory Council its reasons for coming to a different position.

2.10 List of IASS Issued by the IASC and Adopted by IASB

Before it finally ceased operations on 31st March 2001, the IASC had issued the following standards. Following this list is a second one showing IFRSs issued lo dale by the IASB

INTERNATIONAL ACCOUNTING STANDARDS		
IAS No.	**Topic**	**Status**
1	Presentation of Financial Statements	Last revised in May 2012, revised version effective since 1 Jan 2013
2	Inventories	Last revised in Dee. 2003; revised version effective since 1 Jan, 2005

3	Consolidated Financial Statements	Replaced by IAS 27 & IAS 28
4	Depreciation Accounting	Replaced by 1AS 16, 22 & 38
5	Information to be disclosed in Financial Statements	Replaced by IAS 1
6	Accounting Responses to Changing Prices	Replaced by IAS 15
7	Statement of Cash Flows	Last revised in July 2009; revised version effective since 1 Jan. 2010
8	Accounting, Changes in Accounting Estimates and Errors	Last revised in Dec. 2003; revised version effective since 1 Jan, 2005
9	Research and Development Costs	Superseded by 1AS 38
10	Events after the Reporting Period	Last revised in Dec. 2003; revised version effective since 1 Jan. 2005; retitled Sept. 2007
11	Constructing Contracts	Last revised in Dec. 1993; revised version effective since 1 Jan 1995
12	Income Taxes	Last revised in Dec. 2010; revised version effective since 1 Jan. 2012
13	Presentation of Current Assets and Current Liabilities.	Replaced by IAS 1
14	Reporting Financial Information by Segment	Superseded by IFRS 8 since 1 Jan. 2009
15	Information Reflecting the Effect of Changing Prices	Withdrawn effective 1 Jan. 2005

16	Property, Plant and Equipment	Last revised in May 2012; revised version effective since 1 Jan. 2013
17	Leases	Last revised in April 2009; revised version effective since 1 Jan, 2010
18	Revenue	Last revised in Dec. 1998; revised version effective since 1 Jan 2001; Appendix amended April 2009
19	Employee Benefits	Last revised in Nov. 2013; revised version takes effect 1 July. 2014
20	Accounting for Government Grants and Disclosure of Government Assistance.	Last revised in May 2008; revised version effective since 1 Jan, 2009
21	The Effect of Changes in Foreign Exchange Rates	Last revised in Jan. 2008; revised version effective since 1 July. 2009
22	Business Combinations	Superseded by IFRS 3 since March 2004.
23	Borrowing Costs	Last revised May 2008; revised version effective since 1 Jan, 2009
24	Related Party Disclosures	Last revised Nov. 2009: revised version effective since 1 Jan, 2011
25	Accounting for Investments	Withdrawn April 2000
26	Accounting and Reporting by Retirement Benefit Plans	Last revised Jan. 1987; revised version effective since 1 Jan 1990; reformatted 1994
27	Separate Financial Statements	Revised July 2010; refilled May 201 1

28	Investments in Associates and Joint Ventures	Revised and retitled May 2011; effective since 1 Jan. 2013
29	Financial Reporting in Hyper inflationary Economics	Last revised May 2008; revised version effective since 1 Jan, 2009
30	Disclosures in the Financial Statements of Banks and similar Financial Institutions	Superseded by IFRS 7 since Aug. 2005.
31	Financial Reporting of Interests in Joint venture	Superseded by IFRS 11 and IFRS 12, since May 2011
32	Financial Instruments: Disclosure and Presentation	Revision in Dec. 2011 lakes effect on 1 Jan. 2014 while revision in May 2012 took effect on 1 Jan. 2013
33	Earnings Per Share	Last revised Aug. 2008; revised version effective since 1 Jan 2009
34	Interim Financial Reporting	Last revised May 2012; revised version effective since 1 Jan. 2013
35	Discontinuing Operations	Superseded by IFRS 5 since March 2004.
36	Impairment of Assets	Last revised May 2013; revised version takes effect 1 Jan 2014
37	Provisions, Contingent Liabilities and Contingent Assets	Last revised Sept. 1998; revised version effective since 1 July 1999; Currently being revised.
38	Intangible Assets	Last revised April 2009; revised version effective since 1 July 2009

39	Financial Instruments: Recognition and Measurement	First issued in Dec. 1998 and effective since 1 Jan. 2001; has undergone a series of revisions since then and is still being revised,
40	Investment Property	Last revised May 2008; revised version effective since 1 Jan, 2009
41	Agriculture	Last revised May 2008; revised version effective since 1 Jan. 2009

Note: The shaded IASs are no longer applicable because they have either been withdrawn or superseded.

INTERNATIONAL FINANCIAL REPORTING STANDARDS		
IFRS NO.	**Topic**	**Status**
	Conceptual Framework for Financial Reporting	Approved by IASB in Sept. 2010
	IFRS for SMEs	Exposure Draft (ED) issued in Feb. 2007; approved & effective since July 2009.; now due for revision.
1	First-Time Adoption of IFRS	Last revised in May 2012; revised version effective since 1 Jan, 2013
2	Share-Based Payments	Last revised in June 2009; revised version effective since 1 Jan, 2010

3	Business Combinations	Last revised in May 2010; revised version effective since 1 July 2010
4	Insurance Contracts	Last revised Aug. 2005
5	Non-Current Assets Held for Sale and Discontinued Operations	Last revised in April 2009; revised version effective since 1 Jan 2010;
6	Exploration for and Evaluation of Mineral Resources	Issued in Dec. 2004; amended in June 2005; effective since 1 Jan 2006;
7	Financial Instruments – Disclosures	First issued in Aug. 2005 and effective since 1 Jan. 2007; has undergone a series of revisions since then and is still being revised.
8	Operating Segments	Supersedes IAS 14; last revised in April 2009; revised version effective since 1 Jan. 2010
9	Financial Instruments	Intended to replace IAS 39; Phase 3 of the project – dealing with *Hedge Accounting* – was published in Nov. 2013.
10	Consolidated Financial Statements	Last revised in Oct. 2012; revised version takes effect 1 Jan. 2014

11	Joint Arrangements	Last revised in June 2012; revised version effective since 1 Jan, 2013
12	Disclosure of Interest in other Entities	Last revised in Oct. 2012; revised version takes effect 1 Jan. 2014
13	Fair Value Measurement	Issued in May 2011; effective since 1 Jan 2013.
14	Regulatory Deferral Accounts	
15	Revenue From Contract	
16	Lease Accounting	
17	Insurance Contract	

2.11 Financial Reporting Council (FRC)

The predecessor of the FRC, the Nigerian Accounting Standards Board (NASB) was established on September 9, 1982, to develop and issue accounting standards for preparers and users of financial statements in Nigeria. In other words, the NASB was created to do for Nigeria what the then IASC did - and the IASB does - for the world.

In July 2010, the Federal Executive Council approved the move towards convergence of accounting standards in Nigeria with the IFRS. To this end, it directed the NASB to do whatever was necessary to achieve the convergence objective. On September 3rd, 2010, the NASB announced a phased implementation guideline as follows:

i. Publicly listed entities to implement IFRS by January 1st, 2012
ii. Other Public Interest Entities to implement IFRS by January 1st, 2013
iii. Small and Medium-sized Entities to implement the IFRS for SMEs by January 1st, 2014

iv. Micro-sized entities may use either IFRS for SMEs or the Small and Medium-sized Entities Guidelines on Accounting (SMEGA) Level 3 issued by the United Nations Conference on Trade and Development (UNCTAD).

In July 2011, the Financial Reporting Council of Nigeria Act (2011) was signed into law creating the new body and repealing the Nigerian Accounting Standards Board Act (2003). From the information available on the website of FRC (with the direct quotations from the website being shown in *italic* text), the benefits of the FRC Act are:

a. Creation of Enabling Environment

The law would *create the enabling environment for the implementation of the IFRS and guarantee a credible financial reporting regime in both public and private sector entities in Nigeria.*

b. Wealth Creation

It is expected that the FRC Act would enhance *wealth creation and economic transformation* thus facilitating the transformation agenda of the Federal government of Nigeria.

c. Increase in Foreign Direct Investment and assurance of easier access to external capital.

The law would provide *the platform for economic integration, harmonisation and internationalisation are legal reforms that are capable of re-assuring the markets and the public at large that corporate reporting and governance frameworks are sufficiently robust.*

1. *Enhancement of Local and Foreign Investors' confidence in the quality assurance systems of financial reporting in public and private sector entities in Nigeria.*
2. *More Meaningful and decision-enhancing information can now be arrived at from financial statements issued in Nigeria because Accounting, Actuarial, Valuation and Auditing Standards, used in the preparation of these statements, shall be issued and regulated by this Financial Reporting Council.*
3. *The FRC is a unified independent regulatory body for Accounting, Auditing, Actuarial, Valuation and Corporate Governance. As such, compliance monitoring in these areas will hence be addressed from the platform of professionalism and legislation.*

4. *Job creation; as graduates of accounting and related fields, from Nigeria's tertiary institutions shall become internationally acceptable and employable.*
5. *The Public Sector Financial management reform shall be enhanced with the application of Public Sector Accounting Standards which shall be issued by the Financial Reporting Council.*

2.12 Composition of the Board of FRC

According to the FRC Act, the Board of FRC comprise 22 members as follows:

(i) A chairman who shall be an experienced professional accountant
(ii) Two representatives from the Institute of Chartered Accountants of Nigeria (ICAN)
(iii) Two representatives from the Association of National Accountants of Nigeria (ANAN)

One representative from each of the following:

(iv) Chartered Institute of Stockbrokers (CIS)
(v) Federal Ministry of Commerce (FMC)
(vi) Federal Ministry of Finance (FMF)
(vii) Central Bank of Nigeria (CBN)
(viii) Corporate Affairs Commission (CAC)
(ix) Federal Inland Revenue Service (FIRS)
(x) Nigeria Deposit Insurance Corporation (NDIC)
(xi) Securities and Exchange Commission (SEC)
(xii) Nigeria Stock Exchange (NSE)
(xiii) The Office of the Auditor-General for the Federation
(xiv) The Office of the Accountant-General of the Federation
(xv) Chartered Institute of Taxation of Nigeria (CITN)
(xvi) Nigeria Accounting Association (NAA)
(xvii) Nigerian Association of Chambers of Commerce, Industry, Mines and Agriculture (NACCIMA)
(xviii) Nigerian Institute of Estate Surveyors and Valuers.
(xix) National Pension Commission
(xx) Executive Secretary of the Council

2.13 Structure of FRC

At the top of the structure of the FRC is the Board headed by the chairman. The FRC Act established the following 7 Directorates – each, of course, headed by a director – to assist the board in discharging its functions:

(i) Directorate of Accounting Standards – Public Sector
(ii) Directorate of Accounting Standards – Private Sector
(iii) Directorate of Auditing Practices Standards.
(iv) Directorate of Actuarial Standards.
(v) Directorate of Inspections and Monitoring.
(vi) Directorate of Valuation Standards; and
(vii) Directorate of Corporate Governance

The FRC Act also created the following three Standing Committees to, among others, consider, advise and make recommendations to the Council on key issues:

(i) Technical and Oversight Committee
(ii) Finance and General-Purpose Committee
(iii) Audit Committee (non-executives)

2.13.1 Objectives of FRC

The objects of the FRC, according to section 11 of the FRC Act, are to;

(a) protect investors and other stakeholders' interests;
(b) give guidance on issues relating to financial reporting and corporate governance to ICAN, ANAN, CIS, FMC and all other bodies represented in the Council.
(c) ensure good corporate governance practices in the public and private sectors of the Nigerian economy.
(d) ensure accuracy and reliability of financial reports and corporate disclosures, pursuant to the various laws and regulations currently in existence; and
(e) harmonise activities of relevant professional and regulatory bodies as relating to Corporate Governance and Financial Reporting.

2.13.2 Functions of FRC

The functions of the FRC are set out in Section 8 (1) of the FRC Act. They are to;

a. develop and publish accounting and financial reporting standards to be observed in the preparation of financial statements of public interest entities
b. review, promote and enforce compliance with the accounting and financial reporting standards adopted by the Council
c. receive notices of non-compliance with approved standards from preparers, users, other third parties or auditors of financial statements
d. receive copies of annual reports and financial statements of public interest entities from preparers within 60 days of the approval of the Board
e. advise the Federal Government on matters relating to accounting and financial reporting standards
f. maintain a register of professional accountants and other professionals engaged in the financial reporting process
g. monitor compliance with the reporting requirements specified in the adopted code of corporate governance
h. promote compliance with the adopted standards issued by the International Federation of Accountants and International Accounting Standards Board
i. monitor and promote education, research and training in the fields of accounting, auditing, financial reporting and corporate governance
j. conduct practice reviews of registered professionals
k. review financial statements and reports of public interest entities
l. enforce compliance with the Act and the rules of the Council on registered professionals and the affected public interest entities
m. establish such systems, schemes or engage in any relevant activity, either alone or in conjunction with any other organisation or agency, whether local or international, for the discharge of its functions
n. receive copies of all qualified reports together with detailed explanations for such qualifications from auditors of the financial statements within 30 days from the date of

such qualification and such reports shall not be announced to the public until all accounting issues relating to the reports are resolved by the Council

o. adopt and keep up-to-date accounting and financial reporting standards, and ensure consistency between standards issued and the International Financial Reporting Standards
p. specify, in the accounting and financial reporting standards, the minimum requirements for recognition, measurement, presentation and disclosure in annual financial statements, group annual financial statements or other financial reports which every public interest entity shall comply with, in the preparation of financial statements and reports
q. develop or adopt and keep up-to-date auditing standards issued by relevant professional bodies and ensure consistency between the standards issued and the auditing standards and pronouncements of the International Auditing and Assurance Standards Board, and
r. perform such other functions which in the opinion of the Board are necessary or expedient to ensure the efficient performance of the functions of the Council.

The FRC is also empowered under section 8(2) to issue rules and guidelines to implement auditing and accounting standards.

2.13.3 Functions of the Board of FRC

Under section 10 of the FRC Act, the functions of the board of GRC are to;

a. determine broad strategies and priorities.
b. set out a budget, secure the necessary funding and monitor expenditure.
c. appoint the Directors and other senior management staff.
d. oversee the delivery by each directorate of their functions, through regular reports from the directorates' coordinating directors.
e. oversee the performance of the executive through regular reports from the Chief Executive Officer.
f. ensure that the Council and its directorates achieve high levels of accountability and transparency.
g. undertake an annual assessment of the risks to the success of the operations of the Council and oversee the necessary risk mitigation plan; and

h. undertake an annual evaluation of its performance, and that of its committees and operating bodies, against its objectives, including a review of the schedule of matters reserved to the Board.

2.14 Why Are Accounting Standards Necessary?

International Financial Reporting Standards

The principles underlying financial statements prepared the world over in the pre-IFRS period vary from one country to another. This did not enhance the comparability of the financial statements, as there is usually due to the sometimes-wide divergence in the domestic accounting standards adopted in different countries. Things are already changing as approximately 120 nations and reporting jurisdictions already permit or require IFRS for domestic listed companies. Out of these, approximately 90 countries have already fully conformed to IFRS and include a statement acknowledging such conformity in audit reports.

The following are some- of the arguments in favour of IFRS.

1. IFRS are of particular benefit to multinational companies, as the cost of drawing up their financial statements around the world would be substantially reduced if IFRS were adopted in all the countries in which they operate.
2. Global investors and investment analysts are often confused by the different standards in use from one country to another. This makes their task of interpreting financial statements ever more difficult. This constitutes a drawback to cross - border financing transactions, securities trading and foreign investment. It is therefore necessary to have a single set of rules by which assets, liabilities and incomes are measured all over the world. The IFRS meet this need.
3. The financial distress that occurred in Asia in a decade-and-half ago and the global financial meltdown a half-decade ago brought to the fore the need for transparent financial reporting governed by principles and procedures which enjoy global acceptance and application. The development, issuance and adoption of IFRS greatly enhance the transparency of financial reporting.
4. IFRS are useful for developing countries or countries that do not have standard - setting bodies. It should be noted that the cost of establishing standard -- setting apparatus could

be substantial. This is quite apart from the fact that the process of developing and issuing standards is time-consuming.

Revision Questions

Multiple Choice Questions

1. The globalisation of business activities has _________ the complexity as well as the importance of the financial managers' duties.
   (a)Increased (b)Decreased (c)Ignored (d)Vanished
2. Due to globalisation, the financial management function has become _________.
   (a) Less demanding and complex (b)More demanding and complex (c)Less important and complex (d)Outdated and complex
3. International finance mainly discusses the issues related to monetary interactions of at least__________.
   (a)one country (b)two or more countries (c)five countries (d) None of the above
4. International finance is concerned with__________
   (a)exchange rates of currencies (b)monetary systems of the world (c)foreign direct investment (d)all of the above
5. _____ is not a characteristic of speculation.
   (a)Hedging (b) Risk-taking (c) Profit motive (d)Exchange rate fluctuation
6. A source of supply of foreign exchange is ________
   (a)Imports (b)Exports (c) Donations (d)Gifts
7. The foreign direct investment includes __________
   (a)tangible good (b)intangible good (c) intellectual property(d)human resources
8. The main objective of international financial Management is to arrange sufficient funds for meeting the _____________ goals of an organisation.
   (a) short term (b)long term (c)medium term (d)all of the above
9. ______ refers to converting illegal money into legitimate money.
   (a) money laundering (b)tax evasion (c)black money (d)demonetisation
10. Which of the following is known as the paper gold?
    (a)Bitcoin (b)US dollar (c)demand draft (d)special drawing right

Solutions

1	2	3	4	5	6	7	8	9	10
A	B	B	D	A	B	A	D	A	D

Theory Questions

1. Discuss the evolution of international accounting standards.
2. Highlight the composition and functions of the board of the Financial Reporting Council.
3. Discuss the importance of accounting standards in Nigeria.
4. Highlight and discuss the various Accounting Standards with their issuance dates.

CHAPTER THREE

INTERNATIONAL ACCOUNTING STANDARDS 1 (IAS 1)

3.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand:

i. The disclosure requirements of IAS 1
ii. The measurement of assets, liabilities, equities, income and expense.

3.2 Introduction

IAS 1 “Presentation of financial Statements” prescribes the basis for the presentation of financial statements meant for general purposes. According to IAS 1, financial statements should be prepared and presented in a way that will contain transparent and comparable information which will guide and assist users in making relevant and informed economic decisions. IAS 1 was comprehensively revised and reissued in September 2007 and applies to accounting periods beginning on or after 1 January 2009. The objective of the standard is to prescribe the basis for the presentation of general-purpose financial statements, to ensure comparability both with the entity’s financial statements of previous periods and with the financial statements of other entities. The revision introduced some new terminology and changed the titles of financial statements such that:

a. balance sheet became a statement of financial position
b. income statement became a statement of profit or loss and other comprehensive income
c. cash flow statement became a statement of cash flows.

However, entities are not required to use the new titles in their financial statements, but all existing standards and interpretations are being amended to reflect the new terminology.

3.2.1 Presentation of financial statements

The standard covers a number of areas, including the background to the purpose of financial statements, the components of statements, and illustrations of the presentation of the statement of profit or loss and the statement of financial position.

3.2.1.1 The purpose of financial statements

Financial statements provide information, about the financial position, financial performance and cash flows of an entity that is useful to a wide range of users in making economic decisions. To meet that objective, financial statements provide information about an entity's:

a. Assets
b. Liabilities
c. Equity
d. Income and expenses, including gains and losses
e. Contributions by and distributions to owners (in their capacity as owners)
f. Cash flows.

The financial statements must 'present fairly' the financial position, financial performance and cash flows of an entity.

3.2.1.2 Structure and content of financial statements

IAS 1 identifies in detail how the financial statements should be presented. It also sets out some general principles that must be adopted in those statements such as:

a. a clear identification of the financial statements (statement of profit or loss, statement of financial position, etc.)
b. the name of the entity (e.g., XYZ Limited)
c. the period covered by the financial statements (year ended, etc.)

Note: Financial Statements are usually prepared on an annual basis. If this is not the case, the reason for the change (for example to a short accounting period) must be disclosed and state that the figures may not be comparable with previous data.

1. the currency used (e.g.,₦s, £s, $s)
2. the level of rounding used (e.g., if the statements are presented in thousands or millions). For assessment purposes, the figures will be presented in whole numbers for financial statements and not rounded up or down.

3.2.1.3 Statement of Profit or Loss and Other Comprehensive Income

The standard requires certain data to be identified and detailed on the face of the statement of profit or loss. The information included in the statement can be summarised, rather than detailing every single item. The following are required:

i. revenue
ii. finance costs
iii. the tax charge.

The statement ends by showing the profit or loss for the period.

Expenses may be analysed:

a. by nature – raw materials, staffing costs, depreciation, etc. OR
b. by function – the cost of sales, administrative expenses, distribution costs, etc.

Analysing by nature may be more applicable for a manufacturing company. The method used will depend on which one provides a more reliable and relevant information.

The example on the following page uses analysis by function. Note that:

i. it is presumed that the entity is operating on a continuing basis
ii. the information is in summarised form
iii. revenue is the sales revenue less sales returns
iv. cost of sales is the total of opening inventory, purchases less purchases returns, and less closing inventory.
v. distribution costs include costs of selling and delivering goods to customers, for example, delivery vehicle running costs, drivers' wages, warehouse costs
vi. administrative expenses include expenses other than the direct costs of production and distribution costs, for example, office costs, heat and light, etc.

3.2.1.4 The Statement of Financial Position

IAS 1 specifies the minimum information which must be shown on the face of the statement of financial position. It requires entities to separate:

i. non-current assets – property, plant, equipment, plant and machinery, motor vehicles, intangible assets, goodwill, etc.
ii. current assets – inventories, trade receivables, cash and cash equivalents
iii. current liabilities – trade payables, bank overdrafts and taxation
iv. non-current liabilities – bank loans and long-term provisions
v. equity – share capital, share premium, reserves and retained earnings.

An asset is classified as current when:

a. the asset is held primarily for trading
b. the asset is expected to be realised, consumed, or sold within the entity's normal operating cycle
c. when the asset is expected to be realised within twelve months after the reporting period
d. cash and cash equivalent (unless restricted), for example, a short-term investment or deposit that can easily be converted into cash.

Any other assets would then be classified as non-current.

A liability is classified as current when:

a. it is expected to be settled in the entity's normal operating cycle
b. the liability is held primarily for trading
c. the liability is due to be settled within twelve months after the reporting period
d. the liability for which the entity does not have the right at the end of the reporting period to defer settlement beyond twelve months.

Any other liabilities would then be classified as non-current.

The example on the next page shows the way the information should be presented. Notice that the figure for retained earnings is the closing figure from the statement of changes in equity.

Revision Questions

Multiple Choice Questions

1. Which of the following(s) is the basis for the classification of assets as current or non-current as per IAS 1 Paragraph 66
   i. an entity expects to realise the asset or intends to sell or consume it in the normal operating cycle.
   ii. the entity holds the asset primarily for trading.
   iii. the entity expects to realise the asset within twelve months after the reporting period.
   iv. the asset is a cash or cash equivalent (as defined in IAS7) unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.
   v. i and iv

(a)(i) and (ii) only (b)(ii), (iii) and (iv) (c)(i), (ii), and (iii) (d)All of the above

2. Para 10 (a) of IAS1 requires the statement of changes in equity to be shown as part of the statement of financial position. How should such a presentation be made?
   a) It will be appropriate to present separately from the statement of financial position, a statement titled "statement of changes in equity forming part of the statement of financial position."
   b) It will be appropriate to present changes in equity within the statement of profit or loss under expenses.
   c) It will be appropriate to present separately an income statement of financial position, a statement titled "statement of changes in equity forming part of the statement of financial position."
   d) It will be appropriate to present within the balance sheet under the head Reserve and Surplus.
3. Which of the following is not part of the financial statements of an entity under IFRS? Statement of-----------

   (a)value added (b)financial position (c)changes in equity (d)comprehensive income

4. Statement of Affairs is similar to a /an ……………..

   (a)trial balance (b)income statement (c)statement of financial position (d)income and expenditure account

5. Which of the following is not an asset?

   (a)Goodwill (b)Accruals (c)Inventories (d)Prepayments

6. Which of the following is not a non-current asset?

   (a)Land (b)Inventory (c)Motor vehicle (d) Furniture and fittings

7. A statement that shows the performance of a business organisation during an accounting period is described as……………

   (a)fund flow statement (b)statement of cash flows (c) statement of profit or loss (d)statement of financial position

8. In line with the requirements of the International Financial Reporting Standards (IFRS), the balance sheet of a business organisation is now referred to as a statement of ....

   (a)cash flows (b)value added (c)change in equity (d)financial position

9. An asset is a resource owned and used by a business entity to generate income which usually yields ------------to the business entity which controls.

   (a)expenses generated by the firm (b)future economic benefits (c)income generated (d)advance in assets

10. When non-current assets have been acquired, they will be used continuously in the business organisation from one financial year to the other, in other to ensure that each financial period that uses these non-current assets shares out of the --------------- cost of the non-current assets.

    (a)interim (b)purchase (c)latest (d)original

Solutions

1	2	3	4	5	6	7	8	9	10
D	A	A	C	B	B	C	D	B	D

Theory Questions

1. State the components of the statement of financial position
2. What are the elements of financial statements?
3. How is an asset classified in the financial statement?

CHAPTER FOUR

BASIC CONCEPTS OF BOOK – KEEPING

4.1 Learning Objectives

By the end of the chapter, the students should be able to know and understand the;

i. Meaning of book-keeping;
ii. Types of basic accounting books;
iii. Objectives of book-keeping; and
iv. Uses of book-keeping

4.2 Introduction

Book-keeping is the act of record keeping. That is, bookkeeping is how accountants of business entities keep records or events and business transactions that occur in their various organisations. There are two different methods of keeping such records:

i. Theoretical method: known as Theoretical BOOKKEEPING.
ii. The practice method: known as Practical Bookkeeping.

There are certain essential steps to be taken to make the entries involved under the theoretical book-keeping. These steps are stated as follows:

a. There must be a business transaction. A business transaction is an event that can be expressed in monetary terms.
b. After the business transaction has been identified and established, the next step is to identify all the ledger accounts that are involved to enable one record of the business transaction identified
c. The next step is to identify which of these ledger accounts gives, and which of the ledger account receives. They are then separately and respectively given the names "giver" and "receive."

NOTE: In any situation where the ledger account gives and at the same time receives, the amount given should be netted off against the amount received to make the ledger account a net giver or a net receiver.

d. The next step is to remember the rule of double entries which: -
   - (i) Debit the ledger account that receives (receive ledger account).
   - (ii) Credit the ledger account that gives (giver ledger account).

When the recording involves discounts (allowed or/and received) the double-entry says:

- (i) Debit the ledger account that loses (loser ledger account)
- (ii) Credit the ledger account that gains (gainer ledger account)

The various principles and procedures involved in double-entry record keeping will be highlighted in the examples in this and the next chapter.

4.2 Importance/Uses of Bookkeeping

a. It helps to determine the costs and value of purchases and sales of goods and services.
b. It helps to record and control all expenses and incomes.
c. It helps to obtain information about cash in hand and bank.
d. It helps to ascertain debtors' and creditors' balances and positions.
e. It helps to ascertain the profit or loss made during a particular period.
f. It records the value and movement of non-current assets including property owned by the enterprise.
g. It helps to ascertain the financial position of the organisation on any given day.
h. It helps the business to comply with all relevant government regulations.
i. It ensures that accurate financial data are passed into the annual report which is published.
j. It helps to reduce the loss of source documents.

4.3 Basic Source Documents in Accounting:

- (i) Invoice
- (ii) Time Sheets
- (iii) Clock Card
- (iv) Receipt
- (v) Debit Note
- (vi) Credit Note

(vii) Petty Cash Voucher
(viii) Statements
(ix) Local Purchase Order (LPO)
(x) Delivery Note
(xi) Bank Statement
(xii) Goods Received Note

4.5 Subsidiary Books

These are books into which transactions are recorded daily from the source documents and from which transfers are made at a suitable periodic interval to the relevant accounts in the ledger. They are also referred to as Prime Books of entry or Books of original entry.

4.5.1 Uses of Subsidiary Books

i. The subsidiary books aid in memory.
ii. The total amount of sales and purchases can be readily ascertained.
iii. It provides an avenue for the control accounts to be easily prepared.
iv. The total money owed to suppliers and money owed by customers can be readily ascertained.
v. The book of original entries provides an opportunity for totals to be calculated every month.

4.6 Sales Daybook or Journal

This contains a list of the details of all Sales Invoices (credit sales), the date, the name of the customer, the invoice number, and the net amount. When credit sales are affected, the individual customer's account in the sales ledger is debited.

The sales account in the General Ledger is not immediately credited, instead, the particulars of the sales are listed in the Sales Daybook. At the end of the period (usually monthly) the amount column of the Sales Daybook is added up and the figure obtained is transferred to the credit of the Sales account in the general ledger.

Illustration 1

In October 2021, Danlami Enterprises issued the following invoices to its customers. The invoice numbers are 1007 to 1012. He trades in wooden chairs and clocks.

Date	Description of Goods	₦
2/10/21	DON & SONS	
	24 wooden chairs @ ₦500	12,000
	8 wall clocks @ ₦650	5,200
		17,200
4/10/21	MAMMY Enterprises	
	50 wooden chairs @₦500	25,000
6/10/21	SUUNY & SONS	
	80 wooden chairs @₦500	40,000
	100 wall clocks @ ₦650	65,000
		105,000
	Trade discount @ 5%	5,250
		99,750
7/10/21	KAOKAO Enterprises	
	4 wall clocks @₦650	2,600
8/10/21	SUNLOLA Ventures	
	20 wall clocks @₦650	13,000
15/10/21	HANNAH Ventures	
	200 wooden chairs @₦500	100,000
	160 wall clocks @ ₦650	104,000
		204,000
	Trade discount @8%	16,320
		187,680

Required: Prepare the analytical sales daybook of DANLAMI Enterprises for October 2014.

DANLAMI ENTERPRISES

SALES DAYBOOK

DATE	CUSTOMER	INVOICE NUMBER		TOTAL AMOUNT	WOODEN CHAIRS	WALL CLOCK
DATE	CUSTOMER			₦	N	N
2/10/21	DON &SONS	1007	SL	17,200	12,000	5,200
4/10/21	MAMMY Enterprises	1008	SL	25,000	25,000	0
6/10/21	SUNNY & SONS	1009	SL	99,750	38,000	61,750
7/10/21	KAOKAO Enterprises	1010	SL	2,600	0	2,600
8/10/21	SUNLOLA Ventures	1011	SL	13,000	0	13,000
15/10/21	HANNAH Ventures	1012	SL	187,680	92,000	95,680
	Transfer to sales account			345,230	167,000	178,230

Notes

i. The analysis would help the managers access the rate at which each class of stock is sold for efficient management of the business
ii. Where trade discounts were given, the effects were distributed on a pro-rata basis between the two classes of goods sold. E.g.,

Wooden chairs ₦40,000 – (₦40,000 X 5%)
Wall clocks ₦65,000 - (₦65,000 X 5%)

Trade Discount

This is a discount given to a trader buying in large quantities. The invoice price would be the same for all customers, but the net selling price may be different for customers depending on the quantity purchased by them.

4.7 Purchases Daybook

This is a book that is used to record all credit purchases at regular intervals. The necessity for this book is borne out of the voluminous daily purchases which unnecessarily overload the ledger if posted directly. All purchases on credit may be weekly are recorded into the purchases daybook and the total therein is transferred to the purchase's ledger account as a debit entry while the credit entry will go to the creditors/payable accounts.

Illustration 1

MANNY ENTERPRISES made the following purchases on credit:

1/8/2021	M'S Kenny	₦150,000 with invoice No. 1015
	M Akolade & Sons	₦108,000 with invoice No. 0890
4/8/2021	Saidi Yusuf	₦60,000 with invoice No 0895
	Waheed Sunshine	₦82,800 with invoice No. 0899
	Hakilu & Sons	₦98,250 with invoice No. 0880
7/8/2021	Onuh Paul	₦120,000 with invoice No. 0918
	D' Young &Sons	₦67,500 with invoice No. 0920
	Femstar Enterprises	₦337,500 with invoice No 0665

Required:

Enter the transactions in the purchases daybook of Manny Enterprises.

Solution 1

MANNY ENTERPRISES
PURCHASES DAYBOOK

Date	Supplier	PL Ref	Amount
			₦
1/8/2021	M'S Kenny	PL	150,000
	M Akolade & Sons	PL	108,000
4/8/2021	Saidi Yusuf	PL	60,000
	Waheed Sunshine	PL	82,800
	Hakilu & Sons	PL	98,250
7/8/2021	Onuh Paul	PL	120,000
	D' Young & Sons	PL	67,500
	Femtar Enterprises	PL	337,500
31/8/2021	Transfer to Purchases Ledger		1,024,050

4.8 Sales Returns Book or Journal

As earlier said, from the sales earlier made, returns may be made due to many reasons. The implication of sales return is to decrease the total sales figure by the amount returned and in most cases, reduce the earlier reported profit if the returns were made after the final accounts have been prepared.

Illustration 1
Let us refer to illustration 1 (sales daybook)

DANLAMI ENTERPRISES

6/10/20 DON& SONS returned 6 wooden chairs
8/10/20 MAMMY Enterprises returned 4 wall clocks
10/10/20 SUUNY & SONS returned 2 wooden chairs

Required:
Prepare the sales returns book for Danlami Enterprises

Solutio₦1

DANLAMI ENTERPRISES
Sales Returns Daybook

Date	Particulars	Sales Ledger Ref	Amount
			₦
6/10/20	DON& SONS		
	6 wooden chairs		3,000
8/10/20	MAMMY Enterprises		
	4 wall clocks		2,392
10/10/20	SUUNY & SONS		
	2 wooden chairs		1,000
	Transfer to sales return	GL	6,392

Notes (workings on Trade Discount)

4.9 Purchases Returns Book or Journal

After purchasing or taking delivery of goods ordered, it may be possible to return part of the goods received, back to the seller or supplier. The purchaser had been debited for the total value of goods dispatched. Immediately, the seller agrees to the returns, the arrangement becomes a complete transaction, and the accounts of the debtor/receivable must be credited to reduce the liability therein.

Illustration 1
Refer to the illustration on PURCHASES DAYBOOK.

The following returns were made by MANNY ENTERPRISES

			₦
10/8/2020	M'S Kenny	PL	15,000
12/8/2020	M Akolade & Sons	PL	18,000
14/8/2020	Saidi Yusuf	PL	6,000
16/8/2020	Waheed Sunshine	PL	8,280

Required:
Prepare the purchases returns book for MANNY ENTERPRISES
Solution 1

MANNY ENTERPRISES
Return Outwards Book

Date	Supplier		Amount ₦
10/8/2020	M'S Kenny	PL	15,000
12/8/2020	M. Akolade & Sons	PL	18,000
14/8/2020	Saidi Yusuf	PL	6,000
16/8/2020	Waheed Sunshine	PL	8,280
Transfer to Returns outward account		GL	47,280

4.10 Journal

This is a chronological record of business transactions. The information recorded about each transaction includes the date of the transaction, the debit and credit changes in specific ledger accounts, and a brief explanation of the transaction. The journal is used as the book to record transactions that do not fit into other subsidiary books. The information recorded in the journal about each transaction includes:

i. The date of the transaction
ii. The debit and credit changes in specific ledger account
iii. A brief explanation of the transaction is referred to as narration or narrative.

The narration is required to indicate the purpose and authority of the transaction and for efficient use of the journal, candidates must be able to analyse the effect of a transaction on assets, liabilities and owner's equity.

4.10.1 Uses of the Journal

The following are the uses of the Journal

a. Opening and Closing entries
b. Transfer from one account to the other
c. Purchases and sales of fixed assets on credit
d. Correction of errors
e. End-of-the-period adjustments

4.10.2 Layout of Journal

The Journal

Particulars	folio	Dr	Cr
The name of the account to debit		XXX	
The name of the account to credit			XXX
The Narration			

Note:

The name of the account to be debited is always shown first. The name of the account to credit is credited to the right-hand side of the account. The narration is not indented. A blank space should be left after each entry to make each set of journal entries stand out clearly.

Illustration on uses of Journal

The following transactions *t*ook place in the books of Honeywell Ltd in June 2020

i. A machine is bought on credit from Jenny Enterprises for ₦372,000 on June 19^{th}

ii. A motor vehicle is sold to Jejelaye on credit for ₦720,000 0n June 21st

iii. Babetev. P a debtor owed ₦320,000. He offered a motor car in full settlement of the debt in June

iv. 17TH and the offer was accepted.

v. Ilemobayo is a creditor. On June 22nd, his business is taken over by Pumppy ventures to which the debt of ₦90,000 is now to be paid.

Required:

Show the journal entries to record the transactions.

SOLUTION

HONEYWELL LIMITED
JOURNAL

Date	*Description*	*DR*	*CR*
2020		₦	₦
19/06	Machinery	372,000	
	Jenny Enterprises		372,000
Being Machinery bought on credit			
21/06	Jejelaye	720,000	
	Motor Vehicle		720,000
Being a Motor Vehicle sold on credit			
17/06	Motor Car	320,000	
	Babatev		320,000
Being settlement of debt with a motor car			
22/06	Ilemobayo	90,000	
	Pumppy Ventures		90,000
Being debt owed to ilemobayo to be paid to Pumppy Ventures.			

4.11 Cashbook

The cashbook is an extension of the ledger which consists of the cash and bank account combined in a single book. The cashbook serves a dual purpose of being principal books of account as well as subsidiary books. The motive for combining cash and bank accounts is that they deal with receipts and payments. The cashbook can be.

a. Single-column cashbook: This comprises either cash or bank transactions
b. Double-column cashbook: This is made up of both cash and bank transactions
c. Three-column cashbook: This is made up of cash, bank and cash discounts.

4.11.1 Cash Discount

The discount column provided on the debit side is used to record the discount allowed while the one on the credit side is for the discount received. The discount columns are memorandums only; they are not part of the double-entry system. They are not balanced but totalled and the respective total figures are entered in the appropriate discount accounts in the general ledger.

4.11.2 Contra Enterprises

This is a transaction affecting both cash and bank accounts, that is the double-entry is completed in the cash book and is said to have contra entries.

Illustration 1 (involving 2 columns cashbook)

The following transactions took place in the firm of ANDY COLE ENTERPRISES in May 2020.

1/5 Started business with capital in cash NI00,000
2/5 Paid rent of shop by cash ₦10,000
3/5 Latifat lent the business ₦50,000,
4/5 Opened a bank account with ₦50,000. Paid Lawal by cheque ₦20,000
5/5 Sales in cash ₦9,800
7/5 Funke paid us by cheque ₦6,200
9/5 Paid Bulus, a creditor in cash ₦22,000
11/5 Cash sales paid into bank ₦55,000
13/5 Sold goods on credit to Dominica ₦15,000
15/5 Moruf paid us in cash ₦6,500
16/5 Cash paid into the bank ₦40,000
19/5 Repaid Latifat ₦30,000 by cheque
22/5 Cash sales paid directly into the bank ₦10,000
27/5 Paid motor expenses by cheque ₦3,000
28/5 Bought goods from Wale on credit ₦20,000
29/5 Drew cheque foe self ₦20,000

Required; Write up a Two-column cashbook from the above details and balance off as of the end of the month in the books of ANDY COLE ENTERPRISES.

Solution 1

ANDY COLE ENTERPRISES
2 –COLUMNS CASHBOOK FOR THE MONTH OF MAY 2020

DATE 2020	DETAILS	CASH ₦	BANK ₦	DATE 2014	DETAILS	CASH ₦	BANK ₦
1/5	Capital	100,000		1/5	Rent	10,000	
3/5	Loan	50,000		4/5	Bank	50,000	
4/5	Cash		50,000	4/5	Lawal		
5/5	Sales	9,800		9/5	Bulus	22,000	
7/5	Funke		6,200	16/5	Bank	40,000	
11/5	Sales		55,000	19/5	Loan		30,000
15/5	Moruf	6,500		27/5	Motor Expenses		3,000
16/5	Cash		40,000	29/5	Drawings		20,000
22/5	Sales		10,000	31/5	Bal c/d	44,300	108,200
		166,300	161,200			166,300	161,200

Illustration 2 (CASHBOOK WITH THREE COLUMNS)

Enter up a three – column cashbook from the following details in the books of HANDY CAFÉ for January 2019. Balance off at the end of the month, and show the relevant discount accounts, as they would appear in the general ledger.

1/1 Started business with ₦600,000 in the bank. Bought fixtures paying by cheque ₦100,000; and goods by cheque ₦120,000
4/1 Cash sales ₦40,070. Paid rent in cash ₦20,000. Monic paid us her account of ₦22,000 by cheque of ₦21,000, we allowed her a ₦1,000 discount.
7/1 Paid Tope & Co ₦8,000 owing to them by means of a cheque ₦7,600; they allowed us ₦400 discount.
9/1 We received a cheque for ₦38,000 from Ajala, discount having been allowed ₦2,000; Paid rates by cheque ₦20,000.
14/1 Caleb paid us a cheque for ₦11,500 as the final settlement of ₦12,000 debts.
16/1 Paid Lartey his account of ₦12,000 by cash ₦11,400, have deducted ₦600 cash discount.
20/1 Esther paid us a cheque for ₦7,800, having deducted ₦200 discount.
24/1 Cash sales paid directly into the bank ₦10,000
27/1 Drew cheque for potential purchase ₦15,000
28/1 Drew cheque for his daughter's school fees ₦16,000

Solution 2

HANDY CAFÉ
3 – COLUMN CASH BOOK FOR THE MONTH OF JANUARY 2019

DATE	DETAILS	DISC ALLOWED	BANK	CASH	DATE	DETAILS	DISC RECD	BANK	CASH
2019		₦	₦	₦	2008		₦	₦	₦
1/1	Capital		600,000		1/1	Fixtures		100,000	
4/1	Sales			40,070	1/1	Purchases		120,000	
4/1	Monic	1,000	21,000		4/1	Rent			20,000
9/1	Ajala	2,000	38,000		7/1	Tope & Co	40	7,600	
14/1	Caleb	500	11,500		9/1	Rates		20,000	
20/1	Esther	200	7,800		16/1	Lartey	60		11,400
24/1	Sales		10,000		27/1	Cash C		15,000	
27/1	Bank C			15,000	28/1	Drawings		16,000	
					31/1	Bal c/d		427,700	24,300
		3,700	688,300	55,700			100	688,300	55,700
	Bal b/d		427,700	24,300					

4.12 Petty Cash Book

This is one of the prime books of entry, which is a sub-division of the cash book, which is usually given to a junior member of the staff to keep. The keeper is usually called ‘’PETTY CASHIER’’. It is his duty to debit this book with cash received from the cashier or the accountant and credit it with all disbursements made for which he will secure the vouchers.

The petty cashbook usually has several columns on the credit side to record the various classes of petty expenses. The petty expenses columns are totalled periodically and posted to the relevant expenses account in the general ledger.

4.12.1 Imprest System

The petty cashbook is maintained on an imprest system basis. The basic idea of this system is that the cashier or the accountant gives the petty cashier an adequate amount of cash called FLOAT to meet his needs for the ensuring period. At the end of the period, the cashier or the accountant ascertains the amount spent by the petty cashier and gives him an amount equal to that spent. The petty cash in hand should then be equal to the original amount with which the period was started.

Illustration 3

Nnamdi operates his petty cash account on the imprest system. It is maintained at a figure of ₦10,000, and the reimbursement of the imprest is done on the first day of each month. On 30 April 2020, the petty cash box held ₦3,874 in cash. During May 2020, the following petty cash transactions arose:

		₦	
May:	1 cash received to restore imprest		?
	2 stationery	484	
	4 Bus fare to Sango otta	126	
	7 Postage stamps	340	
	8 Window cleaning	190	
	11 correcting fluid	270	
	11 Motor tax	970	
	11 Bus fare to Owode	690	
	15 Paper Clips	90	
	15 Newspapers	400	
	16 Photocopier repair	360	
	20 Drawing pins	90	
	22 Photocopier paper	1,040	
	23 Wages of Office Cleaner	400	
	25 Wrapping paper	160	
	27 Sellotape	170	
	27 Fuel for vehicles	400	
	27 Electric bulb	180	
	28 Typewriter repairs	860	
	28 Bus fares to Victoria Island	180	
	30 Stationery	320	
	30 Cleaning materials	240	

You are required to enter the above transactions in a Petty cash Book, having analysis columns for Postage and stationery, Traveling, Cleaning, Motor and General Expenses.

You are to show the reimbursement of the imprest on 1st June 2020.

Solution 3

NNAMDI ENTERPRISES

PETTY CASHBOOK FOR THE MONTH OF MAY 2014

Amt	Date	Details	Amt	Postages	Travelling	Cleaning	Motor	General Expenses
₦	2020		₦	₦	₦	₦	₦	₦
3,874	1/05	Bal b/d	-	-	-	-	-	-
6,126	1/05	Bank	-	-	-	-	-	-
-	2/05	Stationery	484	484	-	-	-	-
-	4/05	Bus fares	126	-	126	-	-	-
-	7/05	Stamps	340	340	-	-	-	-
-	8/05	Cleaning	190	-	-	190	-	-
-	11/05	Correcting fluid	270	270	-	-	-	-
-	11/05	Motor Tax	970	-	-	-	970	-
-	11/05	Bus fare	690	-	690	-	-	-
-	15/05	Paper clip	90	90	-	-	-	-
-	15/05	Newspapers	400	-	-	-	-	400
-	16/05	Repairs	360	-	-	-	-	360
-	20/05	Pins	90	90	-	-	-	-
-	22/05	Printing paper	1040	1040	-	-	-	-
-	23/05	Cleaner	400	-	-	400	-	-
-	25/05	Paper	160	160	-	-	-	-
-	27/05	Sellotape	170	170	-	-	-	-
-	27/05	Fuel	400	-		-	400	-
-	27/05	Bulb	180	-	-	-	-	180
-	28/05	Repairs	860	-	-	-	-	860
-	28/05	Bus fares	180	-	180	-	-	-
-	30/05	Stationery	320	320	-	-	-	-
-	30/05	Cleaner	240	-	-	240	-	-
				2,964	996	830	1,370	1,800
	31/05	Bal c/d	2,040	Trf to GL	Trf to GL	Trf to GL	Trf to GL	Trf to GL
10,000			10,000					
2,040	1/06	Bal b/d	-	-	-	-	-	-
7,960	1/06	Bank	-	-	-	-	-	-

Revision Questions

Multiple Choice Questions

1. The organisation's indebtedness arising from day-to-day transactions of the business is called----------

   (a)non-current asset (b)current asset (c)current liabilities (d) long-term liabilities
2. The basic accounting is?

   (a)Income = Expenditure (b)Income = Capital (c)Assets = Liabilities (d)Capital = Liabilities
3. The accounting equation is also known as a statement of ---------

   (a)comprehensive income (b)receipts and payments (c)financial position (d)value added
4. The process of identifying, measuring and communicating economic information for the users to take business decisions is described as?

   (a)Materiality (b)Prudence (c)Book- keeping (d)Accounting
5. The book which contains the summary of all accounts necessary to produce the trial balance is ....

   (a)Book-keeping (b)Accounting (c)Ledger (d) Cash book
6. Recording of business transactions in monetary terms in a manner that the financial position of a business can be easily ascertained could be termed as--------------

   (a)accounting (b)bookkeeping (c)costing (d)materiality
7. Which of the following is both a subsidiary book and a ledger account?

   (a)Cash book (b)Sales daybook (c)Purchases Daybook (d)Sales and purchases returns book
8. Which of the following is the implication of the entity concept to a sole trader?

   (a)Liability of the owner is limited. (b)The owner cannot own private assets but only business assets (c)Business can sue and be sued separately as an artificial person (d)Private use of business assets reduces the owner’s capital
9. The ledger may be divided into sales, purchases and ……………..

   (a)general (b)real (c)expenses (d)payable

10. Accounting transactions are not normally posted from the source documents directly to the ledger but are first recorded in --------- books.

    (a)activity (b)subsidiary (c)daily (d)expenses

Solutions

1	2	3	4	5	6	7	8	9	10
C	C	C	D	C	B	A	D	A	B

Theory Questions

1. Write up the various daybooks that can be found in the following transactions that exist in the Books of JONATHAN FURNITURE ENTERPRISES

   May 2 2021: Purchased on credit from OYINLOLA P.
   30 tons of 'A' type nails @ ₦1,200 per ton
   100 tins of wood polish @ ₦80 each
   50 tins of glue @₦150 per tin
   160 meters of Rexine @ ₦20 per meter

   May 4 2021: Sold on credit to ONITOOLO D.
   8 wooden chairs @₦600 each
   6 Cain chairs @₦300 each
   4 wall clock shelves @1,200 each
   A 10% discount is allowed on chairs.

   May 6 2021 JONATHAN returned the following items to OYINLOLA P.
   22 meters of Rexine
   5 tins of wood polish because the life span has expired.

2. State the advantages of books of Prime entry over ledger accounts.

3. HENRY STEPHEN BROTHERS commenced the business on 1/3/2020 with cash at Bank of ₦10,000

   The following transactions took place during the month.

		₦
March 1:	Bought goods from ISAAC W.	10,000
	Purchased Warehouse fitting for cash	1,600
March 2:	Sold goods to T. Thornado	3,200

	Drew cheque for petty cash	800
March 3:	Paid Isaac W. on account	6,000
March 4:	Sold Goods to Bayo A	4,000
March 5:	Received cheque from T. Thornado	3,080
	Allowed him a discount	120
March 6:	Drew cheque for wages	280
March 8:	Bought goods for cash	1,200
March 9:	Sold Goods to Baboje D.	6,800
March 10:	Purchased Goods from Dada	5,200
March 11:	Paid Isaac in settlement	3,800
	Discount allowed by him	200
March 12:	Paid carriage on goods sold	80
March 13:	Drew cheque for wages	280
March 14:	Bought goods from Isaac W.	6,000
March 14:	Bought goods for cash	1,600
March 16:	Sold goods to Bayo A	7,200
March 17:	Banjo A Paid on account	8,000
March 18:	Purchases goods from Matin	3,000
March 19:	Sold goods for cash	3,680
March 20:	Drew cheques for wages	280
March 21:	Sent cheques to Matin	2,880
	Discount allowed by him	120
March 22:	Sold goods to T. Thornado	5,200
March 23:	Bought goods from Isaac W.	9,600
March 24:	Bought goods for cash	2,920
March 25:	Sent cheque to Isaac W	8,000
March 26:	Received from T.Thornado on account	4,000
March 27:	Drew cheque for wages	280
March 28:	Paid Electricity bill	200
March 28:	Paid Rent	320
March 29:	Henry Stephen drew from the Bank for private use	600

Required:
Enter the above transactions in the proper books.

CHAPTER FIVE

BASIC CONCEPTS AND PRINCIPLES OF ACCOUNTING

5.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The meaning of Accounting Concepts and Conventions;
ii. Accounting Bases; and
iii. Accounting policies

5.2 Introduction

Accounting concepts and conventions are fundamental assumptions that guide the preparation of the periodic financial statements of a business entity. They are rules regulating how transactions are recorded. The concepts and conventions give reasons why accounting data are prepared in a typical manner.

5.3 Definitions of Accounting Concepts and Conventions

a. Business Entity

This concept states that a business is recognised as a separate entity on its own quite distinct from the owner of the business. Hence the assets and claims over assets of the business, its expenditures and incomes are quite different and separate from that of the owner of the business.

b. Consistency

This concept holds that when a company selects a method, it should continue (unless conditions warrant a change) to use that method in subsequent periods so that a comparison of accounting figures over time is meaningful. The concepts ensure that the accounting treatment of like items is consistent taking one accounting period with another.

c. Going Concern

This concept assumes that the business unit will operate in perpetuity and that the business is not expected to be liquidated in the foreseeable future.

d. Matching

The concept holds for any accounting period, the earned revenue and all the incurred costs that generated that revenue must be matched and reported for the period. Where revenue is carried over from a period or deferred to a future period, all elements of costs and expenses relating to that revenue are usually carried over or deferred as the case may be.

e. Accrual

Under this, incomes/revenues are recognised when they are earned not necessarily when they are received, and expenses are recognised when they are incurred and not necessarily when they are paid.

f. Realisation

This concept establishes the rule for the periodic recognition of revenue as soon as it is capable of objective measurement and the value of assets received or receivable in exchange is reasonably certain.

g. Money Measurement

This states that the terms of expression or keeping accounting records are in the currency of the area in which the record is kept. Records are therefore expressed in terms of money.

h. Materiality

This principle holds that only items of material value are accorded their strict accounting treatment. An item will be considered material if its omission or misstatement could distort the financial statement.

i. Periodicity

This concept assumes that the financial statement required of the business is expected to be divided into accounting periods (usually one year) and that changes in position be measured over these periods.

j. **Historical Cost**

The historical cost concept holds that cost is the appropriate basis for initial accounting recognition of all assets acquisitions, services rendered/received, expenses incurred, creditors and owners' interests and, it also holds that subsequent to acquisition, cost values are retained throughout the accounting process.

k. **Objectivity**

This principle connotes independence of judgment on the part of the accountant preparing the financial statements. It requires support by verifiable evidence in contrast to subjectivity or dependence on the unverifiable opinion of the accountant preparing the financial statements.

l. **Fairness**

This is an extension of the objectivity principle. In view of the fact that there are many users of accounting information, all having differing needs, the fairness principle requires that accounting reports should be prepared not to favour any group or segment of society.

m. **Duality**

The principle guides the way in which an accountant makes records. Each business transaction is recorded two times. One record is made to the left-hand side, and this is known as DEBIT ENTRY, and this is made to the right-hand side known as CREDIT ENTRY.

n. **Substance Over form**

Although business transactions are usually governed by legal principles, they are nevertheless accounted for and presented in accordance with their substance and financial reality and not merely with their legal form.

o. **Prudence/Conservatism**

This principle demands exercising great care in the recognition of profit whilst all known losses are adequately provided for. It states that revenues should not be recognised until they are realised, and on the other hand all foreseeable losses should be provided for by charging them to the current period's statement

5.4 Accounting Bases

These are methods developed for applying fundamental accounting concepts to financial transactions and items for the purpose of financial statements and in particular; for determining the accounting periods in which revenue and costs should be recognised in the profit and loss account and the amount at which material items should be stated in the statement of financial position. The two recognised accounting bases are;

5.4.1 Accrual Basis

Under this basis incomes/revenues are recognised when they are earned not necessarily when they are received, and expenses are recognised when they are incurred and not necessarily when they are paid.

5.4.2 Cash Basis

Under this basis incomes/revenues and expenses are recognised in the accounting period in which they are actually received and paid. Thus, under this basis, Receivables' balances and Payables' balances are not carried on the financial position.

5.5 Accounting Policies

These are specific accounting bases selected and consistently followed as being in the opinion of the management, appropriate to its circumstances and best suited to present fairly its result and financial position. The following are some of the areas in which divergent accounting policies may exist:

- (i) Consolidation policy
- (ii) Construction Contracts
- (iii) Taxation
- (iv) Inventory
- (v) Receivables
- (vi) Payables
- (vii) Liabilities and provision
- (viii) Intangible assets

(ix) Depreciable assets

(x) Pension costs.

Revision Questions

Multiple Choice Questions

1. The rules that assume that the business unit will operate in perpetuity is called ---------
   (a)entity (b)periodicity (c)going concern (d)realisation
2. The following are accounting conventions except ………..
   (a)Materiality (b)Going concern (c)Substance over form (d)Prudence
3. The accounting concept that advocates similar presentation of information from one year to another is called------------ concept
   (a)Matching (b)Accrual (c)Consistency (d)Duality
4. The name called business organisation by accountants is?
   (a)Materiality (b)Periodicity (c)Entity (d)Dual
5. The concept that says every economic unit regardless of its legal form of existence is treated as separate in accounting from parties having an economic interest in it is called….
   (a)entity (b)matching (c)historical (d)consistency
6. The medium through which the foregoing fundamental accounting concepts are applied to financial transactions and the preparation of financial statements is accounting …….
   (a)bases (b)policies (c)method (d)rules
7. The bases, rules, principles, conventions and procedure adopted in preparing and presenting financial statements is called accounting…………..
   (a)policies (b)method (c)bases (d)rules
8. Basic principles of accounting are measurement, revenue recognition, expense recognition and …………
   (a)fairness (b)full disclosure (c)accrual basis (d)materiality
9. The concept that assumes the business unit will operate in perpetuity is ………
   (a)duality aspect (b)going concern (c)money measurement
10. The concept that says every economic unit regardless of its legal form of existence is treated as separate in accounting from parties having an economic interest in it is called….
    (a)Entity (b)Matching (c)Historical (d)consistency

Solutions

1	2	3	4	5	6	7	8	9	10
C	B	C	C	A	C	A	B	B	D

Theory Questions

1. Explain the term “Accounting concepts.”
2. State and discuss the accounting applications of four fundamental accounting concepts.
3. Why should a business separate the transactions of his business from those of his private life?
4. Discuss the criteria that make a business a Going Concern.
5. Write short notes on the following:
    a. Historical concept
    b. Going Concern
    c. Accrual
    d. Business Entity
    e. Matching
6. One of the features of non-current assets is that they are used in a business for more than 12 months. The cost/revalued amounts of such items are therefore spread over their useful life. Put up a convincing argument on the accounting concept this accounting treatment upholds.

CHAPTER SIX

CHARACTERISTICS AND PRINCIPLES OF ACCOUNTING REPORT

6.1 Learning Objectives

At the end of the chapter, the students should be able to know and understand the;

i. Meaning of Accounting Report;
ii. Characteristics of accounting reports;
iii. Users of accounting reports;
iv. Types of accounting reports;
v. Format of accounting reports; and
vi. Importance of accounting reports

6.2 Introduction

Accounting reports are periodic statements that present the financial status of a company at a certain point in time, or over a stated time period. It details the business transactions and operations. They are a compilation of financial information that is derived from a business's accounting records. Their nature varies, as they can be brief or custom-made with a specific purpose: detailing sales per region, the profitability of a product, etc. Usually, these reports are considered to be financial statements which include:

Statement of financial position: is a snapshot of a business at a specific time and shows the ending assets, liability, and equity balances as of the reporting date. It is useful to measure the financial reserves and liquidity of a business. FORMAT

Statement of profit or loss and other comprehensive income: is also known as a profit or loss report. It details the revenue earned over a certain period of time. FORMAT

Statement of the *flows*: as the name states, it is a statement of the *flows* of cash both in and out. It details the sources and uses of cash in relation to a business's operations, investments, and financing. It is often considered the most reliable source of information when it comes to the cash generation capacity of a firm. FORMAT.

6.3 Importance of Accounting Report

These reports are important elements of a business, regardless of its size. As we have said, they are very useful when it comes to maintaining a track record of transactions, cash flow, income, etc. But they also reduce the risk of reporting inconsistencies to investors, financial managers, or worse, tax authorities. Some other benefits you can reap from these analytical tools or reports include:

i. **Knowing the business's financial health**: Generating accounting reports is crucial for the correct management and functioning of a business. They provide all the key information needed to paint an accurate picture of the company's financial health and help decision-makers make important financial and non-financial decisions to ensure the company is growing in a profitable way. Having an objective view of the financial situation enables top management to make better-informed decisions for investments, sales, and purchases.
ii. **Maintaining a budget:** In order to ensure the correct functioning of the different strategies and activities, managers need to set a budget that will cover everything while still ensuring profitability. This is a fundamental aspect, especially considering that certain small businesses fail due to cash flow mismanagement. Smart accounting reports prevent this from happening by providing businesses with all the needed information to make the best decisions and build a sustainable budget.
iii. **Organise transactions and invoices:** Transparency is key when it comes to efficient financial reporting. Reporting in accounting helps you do just that by providing an efficient bookkeeping system of all transactions and invoices to keep close track of every movement. Having a centralised location for transactions with the time, date, and nature of the transaction helps organisations understand money and goods distribution.
iv. **Stay compliant with law and tax regulations**: The risk of greed, theft, and dishonesty exists everywhere – and every month we discover corporate abuse somewhere in the world. Companies have to be held accountable for their methods and ways of running a business, and therefore specific accounting areas were enforced to eliminate fraud (auditing, income taxation, …). For that purpose, monthly accounting reports serve as a means for businesses to prove to authorities that they are staying compliant with any laws and tax regulations,

they assist organisations in calculating the correct amounts of taxes to pay keeping in mind regulatory guidelines.

v. **Improve relationship with investors**: As we said already, professional accountant reports provide a complete picture of a company's financial health. This also proves to be a very useful document when it comes to attracting new investors and keeping the ones you already have happy.

vi. **Minimise errors**: You might have full trust in your accountant's reporting abilities, however, managing data and sensitive information manually is both time-consuming and risky due to the possibility of human error. With modern accounting statements generated with professional online reporting software, the process of calculation and report generation is done automatically. This means more time to make informed decisions as well as significant mitigation of errors that can resonate across the organisation.

Accounting statements will let you keep track of business transactions, but they will also help you maintain a budget, predict cash flow, and forecast revenue. They also allow for an assessment of the current situation compared to a previous one and/or compared to a forecast. The more accurate the records, the better the financial analysis or projection.

In general, a well-implemented accounting reporting system makes it easier to access the financial statements you need, whenever you need them. Good accountancy helps financial analysts to understand and interpret the data, and thus communicate it effectively. To do so, however, you need several tools: good accounting software, but also a solid online data visualisation tool. We will go deeper into the role of visuals for efficient financial analysis, but first, let's take a deeper look into the common types of financial reports.

6.4 Characteristics of Accounting Report

i. **Relevance:** The information must be relevant to the situation and purpose for which the manager wants to use it.

ii. **Accuracy:** The management information should be accurate because using incorrect information could have serious and damaging consequences for an organisation.

iii. **Non-Ambiguity:** The information must not be complex and should be explainable to the users

iv. **Clarity:** The information must be clear to the users.

v. **Cost-effectiveness:** The benefit to be derived from the information should outweigh the cost of gathering the information.

vi. **Timeliness:** The information must be timely as the information which is not available until after the decision is made will be useful only for comparisons and longer-term control and may serve no purpose even then.

vii. **Understandable:** The user of the information should be able to understand the information at every point in time.

viii. **Verifiability:** The information should be able to be verified

ix. **Objectivity:** The information should be objective and not to be bias

x. **Completeness:** An information user should have all the information he needs to do his job properly for him to make a good decision.

6.5 Users of Accounting Reports

i. Owners

ii. Management

iii. Regulatory Agencies

iv. Government

v. Trade Payables/Creditors

vi. Investors

vii. Employees

viii. Researchers

Revision Questions

Multiple Choice Questions

1. The qualitative characteristic of accounting information that reflects when accounting information is clearly presented is called----------------
   (a)understandability (b)relevance (c)comparability (d)reliability
2. In the accounting cycle, business events start when the bookkeeper analyses the transaction and records it in a --------------------
   (a)general journal (b)journal (c)source document (d)suspense account
3. A bank as an entity can be classified as a user of accounting information categorised under which of the following:
   (a)Equity investor (b)Loan creditor (c)Customer (d)Analyst
4. The acronym "FRCN" means …………..
   (a)Federal Republic Council of Nigeria (b)Financial Regulations Council of Nigeria (c)Financial Reporting Council of Nigeria (d)Federal Regulations Council of National
5. Which of the following can be regarded as a fictitious asset?
   (a)Furniture and fittings (b)Fixtures and fittings (c)Franchise and copyright (d)Computer equipment
6. The acronym "IASB" means International Accounting --------------
   (a)Statutes Board (b)Statutory Bureau (c)Standards Board (d)Statements Board
7. IAS ----------- involves the presentation of the financial information to the users of financial reports. (a)1 (b)2 (c)3 (d)4
8. The framework definition of equity is the residual interest in the assets of the entity after ………………….
   (a)deducting all its expenses (b)adding all the income (c)deducting all the liabilities (d)deducting all the drawings
9. A resource owned and used by a business entity for the purpose of generating income is called ……………... (a)income (b)asset (c)sales (d)liability
10. The acronym "FRC" means …………
    (a)Financial Reporting Committee (b)Finance Responsibility Council (c)Financial Reporting Council (d)Financial Reporting Consular

Solutions

1	2	3	4	5	6	7	8	9	10
A	A	D	C	C	C	A	C	B	C

Theory Questions

1. Discuss various needs of the users of accounting information
2. Explain the term Accounting Report
3. Highlight the qualities of a good accounting report

CHAPTER SEVEN

NATURES AND BASIS FOR ACCOUNTING EQUATION

7.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Meaning and various types of capital;
ii. Importance of accounting equation;
iii. Various types of liabilities; and
iv. Various types of assets

7.2 Introduction

The accounting equation (or statement of financial position equation) simply reflects the fact that the assets of a firm must be equal to the claims over its assets at any point in time. For a firm which does not owe any liabilities to persons other than the owner, it is obvious that the owner has the exclusive claim over the assets of the business. In this, instance, the equation is:

Assets = Capital

For a business that also owes liabilities to external parties, the claims over its assets are held by the owner and the parties to whom the liabilities are owed. Thus, the sum of the capital and liabilities must be equal to the assets.

Hence the equation changes to

Assets = Capital + Liabilities

Another way of expressing the second equation is to move the liabilities to the left-hand side as follows:

Assets – Liabilities = Capital

Since assets minus liabilities are equal to net assets, the last equation can alternatively be expressed as:

Net assets = Capital

The equation holds true irrespective of the nature or size of a business entity. On the statement of financial position, the net assets will always be equal to capital. Since net assets, in fact, represent equity, it is also true to express the equation as:

Net assets = Equity

A fully worked example now follows illustrating how the final accounts of a sole trader arc drawn up from a trial balance.

Illustration 1

The following trial balance was extracted from the books of Metsese Enterprises on 31st December, 20X8:

	DR. ₦	CR. N
Purchases	368,400	
Sales		517,900
Drawings	14,100	
Returns inwards	7,300	
Returns outwards		
Discounts allowed	10,200	6,200
Discounts received		
Receivables	45,000	8,400
Payables		
Inventory	34,300	57,100
Freehold premises at a cost	46,000	
Motor vehicles at cost	12,000	
Furniture at cost	2,500	
Provision for depreciation on motor vehicles		4,500
Provision for depreciation on furniture		1,000
Cash at bank	5,000	
Cash in hand	1,900	
Salaries	40,600	
Carriage inwards	22,200	
Carriage outwards	10,300	
Printing and stationery	3,600	
Electricity and water	14,900	
Insurance	6,800	
General expenses	34,800	
Provision for bad debt		200
Bad debt written off	400	

Capital		70,000
Rent received		3,800
Commission received		11,200
	680,300	680,300

The following information should be taken into account:

i. Inventory on 31st December 20X8 was valued at ₦31,800.

ii. Accrued expenses at 31/12/X8 were salaries ₦1,800 and electricity ₦80.

iii. Prepaid expenses at 31/12/X8 were insurance ₦400 and general expenses ₦500.

iv. Adjust provision for bad debt to 2% of receivables and create provision for discount allowable at 1% of receivables.

v. Commission due but yet to be received at 31/12/X8 amounted to ₦800.

vi. Charge depreciation on non-current assets as follows:

   a. Furniture : 20% on cost

   b. Motor vehicles : 10% on cost

vii. Rent received in advance at 31/12/X8 amounted to ₦200.

viii. Goods costing ₦1,200 were taken by the owner for private use. This was yet to be recorded in the books.

ix. Following the recommendations of a professional valuer, Mr Metsese intends to revalue freehold premises at ₦60,000

You are required to prepare:

a. Statement of profit or loss and other comprehensive income for the year ended 31st Dec. 20X8; and

b. Statement of financial position as of that date.

Solution:

METSESE ENTERPRISES

Statement of Profit or Loss and Other Comprehensive Income

For the year ended 31st December, 20X8

	N	N
Sales		517,900

Less: Returns inwards		(7,300)
Net Sales		510,600
Less: Cost of Sales		
Opening Inventory (Note I)	34,300	
Purchases (368,400 – 1,200)	367,200	
Returns outwards	(6,200)	
Carriage inwards	22,200	
Cost of goods available for sale	417,500	
	(31,800)	385,700
		124,900
Gross profit		
Add: Other incomes		
Discount received	8,400	
Rent received (3,800 – 200)	3,600	
Commission (11,200 + 800)	12,000	24,000
		148,900
Less: Administrative Expenses		
Salaries (40,600 + 1,800)	42,400	
Printing & Stationery	3,600	
Electricity and water (14,900 + 80)	14,980	
Insurance (6,800 – 400)	6,400	
General expenses (34,800 – 500)	34,300	
Depreciation:		
Motor vehicles (10% x 12,000)	1,200	
	500	(103,380)
Less: Distribution Costs		
Discount allowed	10,200	
Carriage outwards	10,300	
Bad debt	400	
Increase in provision	700	
	441	
Provision for discount allowable	441	
[1% x (45,000 – 900)]		
		(22,041)
Net profit for the year		23,479
Other Comprehensive Income		
Gain on revaluation of freehold premises		14,000
(60,000 -46,000)		
Total comprehensive income for the year		37,479

METSESE ENTERPRISES

Statement of financial position as of 31st December 20X8

	N	N	N	
ASSETS				
Non-current assets	Cost/ Valuation	Accum. Depn.	NBV	
Freehold premises	60,000	-	60,000	
Motor vehicles	12,000	5,700	6,300	
Furniture	2,500	1,500	1,000	
	74,500	7,200	67,300	
Current assets				
Inventory			31,800	
Receivables		45,000		
Provision for bad debt		(900)		
Provision for discount allowable		(441)		
			43,659	
Prepayments (400 + 500)			900	
Accrued income			800	
Cash at bank			5,000	
Cash in hand			1,900	
				84,059
Total assets				151,359
EQUITY AND LIABILITIES				
Capital at 1/1/X8				70,000
Add: Total comprehensive income for the year				37,479
				107,479
Less: Drawings (14,100 + 1,200)				15,300
Owner's equity				92,179
Current Liabilities				
Payables			57,100	
Accruals (1,800 + 80)			1,880	
Interest received in advance			200	
				59,180
Total equity and liabilities				151,359

The following points should be noted regarding the solution above:

1. Unless otherwise stated, the Inventory shown on the trial balance is the opening Inventory while the closing Inventory is disclosed as additional information to the trial balance.
2. The adjustments required per the additional information to the trial balance are as follows:
    a. Additional Information and Nature of Adjustment

b. Closing Inventory
c. Accrued expenses (or accruals)
d. Prepaid expenses (or prepayments)
e. Provision for bad debt and provision for discount on Receivables
f. Accrued income
g. Depreciation of non-current assets
h. Income received in advance
i. Drawings
j. Gain on revaluation of asset

Revision Questions

Multiple Choice Questions

1. The basic accounting is?
   (a)Income = Expenditure (b)Income = Capital (c)Assets = Liabilities (d)Capital = Liabilities
2. If Assets = L + OE. OE means:
   (a)Owner's equation (b)Owner's enterprise (c)Owner's elite (d)Owner's equity
3. Nominal accounts are meant to record the following except ………
   (a)Sales (b)Purchases (c)Opening stock (d)Capital
4. Asset= Current liabilities+?
   (a)Capital (b)Creditors (c)Debtors (d)Cash
5. The two broad classifications of impersonal accounts are real and ……….
   (a)revenue (b)nominal (c)intangible (d)expenses
6. Real accounts comprise of the following except…………….
   (a)building (b)furniture (c)sales (d)inventory
7. The assets that can be seen and touched are called ………
   (a)physical (b)solid (c)tangible (d)intangible

Use the following to answer Question 8

	Assets	Liabilities	Capital
	₦	₦	₦
	?	10,000	30,000
	170,000	70,050	?
	5,000	?	3,000
	?	500,000	300,000
	40,075	?	20,025

8. The capital in the above "b" is…………
   (a)69,950 (b)79,950 (c)89,950 (d)99,950

Use the following to answer Question 9.

	Assets	Liabilities	Capital
	₦	₦	₦
	?	10,000	30,000
	170,000	70,050	?
	5,000	?	3,000
	?	500,000	300,000
	40,075	?	20,025

9. The liabilities in "c" above are……………

   (a)₦5,000 (b)₦3,000 (c)₦2,000 (d)₦1,000

Use the following to answer Question 10.

	Assets	Liabilities	Capital
	₦	₦	₦
	?	10,000	30,000
	170,000	70,050	?
	5,000	?	3,000
	?	500,000	300,000
	40,075	?	20,025

10. The assets in "d" above are…………..

   (a)₦600,000 (b)₦700,000 (c)₦800,000 (d)₦900,000

Solutions

1	2	3	4	5	6	7	8	9	10
C	D	D	A	B	C	C	D	C	C

Theory Questions

The following trial balance was extracted from the books of Samy Enterprises as of 30th June 2019.

	Dr	Cr
	₦	₦
Purchases	525,100	
Capital		250,000
Returns outward		15,000

Sales		1,294,750
Drawings	35,250	
Discount Allowed	25,500	
Trade debtors	112,500	
Freehold premises (at cost)	180,000	
Returns inward	18,250	
Discount received		21,000
Stock 1st July 2018	85,750	
Trade Creditors		142,750
Motor vehicles (at cost)	30,000	
Cash at bank and in hand	17,250	
Salaries	101,500	
Furniture (at cost)	483,750	
Provision for depreciation on motor vehicles		11,250
Provision for depreciation on furniture		2,500
Carriage on purchases (carriage inward)	55,500	
Stationery	10,875	
General expenses	7,900	
Carriage on sales (carriage outwards)	25,750	
Provision for bad/doubtful debts		5,000
Electricity and water	12,250	
Insurance	4,500	
Bad debt	1,000	
Rent received		9,500
Commission received		28,000
15% fixed deposit with bank	50,000	
(place on 1st January 2019)		1,875
	1,782,625	1,782,625

The following additional information was given.

i. Inventory/Stock on 30 June 2019 amounted to ₦79,500.

ii. Accrued expenses on 30 June 2019 consisted of salaries ₦4,500 and electricity ₦2,000.

iii. Prepaid expenses at the same date were; insurance ₦1,000 and general expenses ₦1,250.

iv. Additional bad debt of ₦1,500 is to be written off.

v. Adjust provision for bad debts to 4% of trade debtors balance and raise a provision for discount allowable at 2½% of trade debtors.

vi. Interest on the fixed deposit is outstanding for April to June 2019

vii. Depreciate fixed assets at the following rates:

Furniture at 10% per annum on cost

Motor vehicles at 20% per annum on cost.

viii. Rent received in advance at the trial balance date was ₦500

ix. The following drawings – yet to be recorded were made by the owner:

Goods costing ₦5,000

Cash amounting to ₦7,500

You are required to prepare:

a. Statement of profit or loss and other comprehensive income for the year ended 30th June 2019.

b. Statement of financial position as of that date.

CHAPTER EIGHT

CAPITAL AND REVENUE ITEMS

8.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Capital expenditure
ii. Revenue expenditure
iii. Capital Income
iv. Revenue Income

8.2 Introduction

Expenditure is the value of financial resources committed by a business organisation over a period of time. In accounting, expenditure can be divided into two categories: capital expenditure and revenue expenditure

8.3 Capital Expenditure

This is an expenditure from which the business will derive benefits for more than one year. The resources acquired with this expenditure will be held and used by the business for more than one year. Capital expenditure is incurred when a business spends money either to:

1. Buy non-current assets;
2. Get the non-current asset operational (ready for use) and
3. Add to the value of existing non-current assets.

Therefore, expenses incurred to get the non-current assets ready for use (e.g., legal cost, installation cost, carriage costs, cost of painting etc) are also capitalised.

Expenditure incurred to add value to an existing non-current asset (subsequent expenditure) would be capitalised if it is capable of prolonging its life or improving its existing capacity or altering its former state. e.g., cost of alteration.

Capital expenditure is not charged as an expense in the Profit or Loss Account (although depreciation is calculated to write off capital expenditure gradually over time. Depreciation is an expense in the Profit or Loss Account.

8.4 Revenue Expenditure

This is the expenditure that the full benefits of which are used up within one year. Revenue expenditure therefore includes:

Expenses incurred for the purpose of the day-to-day running of the business. It includes expenditures classified as selling and distribution, Administration, finance and other expenses, for example, wages and salaries, rent expenses, lighting and cooling etc,

Subsequent expenditure on non-current asset which is capable of maintaining their existing capacity e.g., repair and maintenance, redecoration cost etc.

Revenue expenditure is charged to the Profit or Loss Account of the period provided that it relates to the trading activities and sales of that period.

S/NO	Expenditure	Types
1	Buying of 12.5KVA Generator	Capital
2	Cost of Installing the Generator	Capital
3	Buying of Motor Vehicle	Capital
4	Petrol costs for Motor Vehicle	Revenue
5	Putting Extra headings on Motor Vehicle	Capital
6	Repair to Motor Vehicle	Revenue
7	Legal cost of acquiring Building	Capital
8	Painting outside of the new Building	Capital
9	Re-painting of the outside building in 8 above	Revenue
10	Electricity cost of using machinery	Revenue

8.5 Treatment of Loan Interest

If money is borrowed to finance the purchase of a non-current asset, interest will have to be paid on the loan. Most Accountants are of the opinion that the loan interest is not a cost of acquiring the assets but is simply a cost of financing its acquisition. This means that the loan interest is revenue expenditure and not capital expenditure. But recent development in accounting practice has however considered it acceptable to capitalise the interest incurred in acquiring a non-current asset.

Illustration 1

Some of the following items should be treated as capital and some as revenue. For each of them, state with reason for their classification.

i. The purchase of Machinery for use in the business
ii. Carriage paid to bring the machinery in (i) above to the factory
iii. Cost of installing the machinery in (i) above in the factory
iv. Complete redecoration of the premises
v. The purchase of a soft drinks vending machine for the canteen
vi. Wages paid by a building contractor to his own workmen for the erection of an office in the builder's stockyard
vii. Purchase of new motor van
viii. Cost of altering the interior of new motor van to increase carrying capacity
ix. Cost of motor taxation license for new motor van
x. Cost of writing the firm's name on the new motor van
xi. Purchase of replacement engine for existing motor van
xii. Cost of motor taxation license for existing motor van
xiii. Major repair costing ₦20,000 to existing motor van
xiv. Legal costs of collecting debts
xv. Legal charges on acquiring new premises

Solution 1

S/NO	Classification	Reasons
i.	Capital	Non-current Asset
ii.	Capital	Initial cost
iii.	Capital	Initial cost
iv.	Revenue	Maintenance
v.	Capital	Non-current Asset
vi.	Capital	Non-current Asset

vii.	Capital	Non-current Asset
viii.	Capital	Improvement
ix.	Capital	Initial cost
x.	Capital	Initial cost
xi.	Revenue	Maintenance
xii.	Revenue	day-to-day running of the business
xiii.	Revenue	Maintenance
xiv.	Revenue	day-to-day running of the business
xv.	Capital	Initial cost

8.6 Capital Income

When an item of capital expenditure (Non-current Asset) is sold, the receipt is called capital receipt or income. This income is derived from the sale of non-trading assets including non-current assets. The profit or loss derived from the sale of non-trading assets is included in the statement of profit or loss and other comprehensive income in the year in which the sales took place. This particular income is regarded as other comprehensive income in the financial statement.

8.7 Revenue Income

This is income derived from;

i. Sales of trading assets i.e., inventory
ii. Interest received from investments
iii. Revenue income is included in the statement of profit or loss of the period in which it relates.

Revision Questions

Multiple Choice Questions

1. --------------- are the accounts of individuals, natural or corporate, who have business dealings with the organisation.

   (a) Revenue account (b)Expenses Account (c)Personal Account (d)Intangible Account
2. Expenditure which will be consumed within an enterprise's normal operating cycle, and which is intended for conversion into cash within the normal operating cycle of a business is known as ……..

   (a)revenue income (b)revenue expenditure (c)capital income (d)capital expenditure
3. The capital expenditure is referred to as?

   (a) Items that are bought when an enterprise spends money to add to the value of the existing capital item

   (b) An expenditure that benefits more than one item.

   (c) Items that are sold and income received

   (d) Items that are expected to provide benefits to the owners for a period of less than one accounting year.
4. Classify the capital expenditure in the statement of financial position as a---------------

   (a)non-current asset (b)income (c)liability (d)expense
5. Identify the **ODD** one among the following assets.

   (a)Land and Building (b)Furniture and fittings (c)Rent prepaid (d)Plant and Machinery
6. Sales proceeds from sales of Motor vehicle is ....

   (a)revenue income (b)revenue expenditure (c)capital income (d)capital expenditure
7. ………………… exist where capital items are sold, and money received. They are said to have occurred outside the ordinary activities of the enterprise.

   (a)Revenue income (b)Revenue expenditure (c)Capital income (d)Capital expenditure
8. Which of the following can be regarded as revenue expenditure?

   (a) Cost incurred on warehouse expansion

(b) Formation expenses of a new business

(c) Acquisition of non-current assets acquired

(d) Expenses incurred on repairs of non-current assets

9. The cash basis of accounting requires the recognition of revenue only when they are …

   (a)due (b)earned (c)paid (d)received

10. A transaction on which an entity receives income in advance is classified as……………

   (a)accrual (b)accrued income (c)liability (d)prepaid

Solutions

1	2	3	4	5	6	7	8	9	10
C	D	A	A	C	C	C	D	D	C

Theory Questions

1. Distinguish between Capital and Revenue Expenditure.

2. State whether each of the items below is a Capital or Revenue Expenditure and state the reasons in each case;
   - Paid for the erection of signpost ₦5,600
   - Bought various types of goods for resale for ₦60,000
   - Paid ₦600 to the men who unloaded the goods purchased in (ii) above
   - Purchase a delivery van for ₦50,000
   - Paid an advertisement cost to cover a product for three years ₦120,000
   - Acquired some fixtures and fittings for ₦42,000
   - Paid one year rent advance of ₦36,000

3. Why should revenue expenditure be distinguished from capital expenditure? Give at least six examples of transactions in each category.

4. List Ten items, which can be classified as Capital Expenditure and Revenue Expenditures

CHAPTER NINE

SOURCE DOCUMENTS AND SUBSIDIARY BOOKS

9.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The various source documents used in an organisation;
ii. The uses Sales Daybook, Purchase Daybook;
iii. Different types of Cashbooks; and
iv. Different types of discounts

9.2 Introduction

These are internal documents that act as tangible evidence of a business deal. They function by giving the bookkeeping process a reference point. The source documents in accounting refer to the trail which is created each time a business engages in a financial transaction.

9.3 The Source Documents are as follows:

a. Invoice
b. Time Sheets
c. Clock Card
d. Receipt
e. Debit Note
f. Credit Note
g. Petty Cash Voucher
h. Statements
i. Local Purchase Order (LPO):
j. Delivery Note
k. Bank Statement
l. Goods Received Note

9.4 Subsidiary Books

These are books into which transactions are recorded on a daily basis from the source documents and from which transfers are made at a suitable periodic interval to the relevant accounts in the ledger. They are also referred to as Prime Books of entry or Books of original entry.

9.4.1 Uses of Subsidiary Books

i. The subsidiary books aid in memory.
ii. The total amount of sales and purchases can be readily ascertained.
iii. It provides an avenue for the control accounts to be easily prepared.
iv. The total money owed to suppliers and money owed by customers can be readily ascertained.
v. The book of original entry provides an opportunity for totals to be calculated every month.

9.5 Sales Daybook or Journal

This contains a list of the details of all Sales Invoices (credit sales); the date, the name of the customer, the invoice number, and the net amount. When credit sales are affected, the individual customer's account in the sales ledger is debited.

The sales account in the General Ledger is not immediately credited, instead, the particulars of the sales are listed in the Sales Daybook. At the end of the period (usually monthly) the amount column of the Sales Daybook is added up and the figure obtained is transferred to the credit of the Sales account in the general ledger.

Illustration 1

In the month of October 2019, Kokosari Enterprises issued the following invoices to its customers. The invoice numbers are 1007 to 1012. He trades in wooden chairs and clocks.

Date	Description of Goods	₦
2/10/19	DON & SONS	
	24 wooden chairs @ ₦500	12,000
	8 wall clocks @ ₦650	5,200
		17,200
4/10/19	MAMMY Enterprises	
	50 wooden chairs @₦500	25,000
6/10/19	SUUNY & SONS	

	80 wooden chairs @₦500		40,000
	100 wall clocks @ ₦650		65,000
			105,000
Trade discount @ 5%		5,250	
			99,750
7/10/19	KAOKAO Enterprises		
	4 wall clocks @₦650		2,600
8/10/19	SUNLOLA Ventures		
	20 wall clocks @₦650		13,000
15/10/19	HANNAH Ventures		
	200 wooden chairs @₦500		100,000
	160 wall clocks @ ₦650		104,000
			204,000
	Trade discount @8%		16,320
			187,680

Required: Prepare the analytical sales daybook of Kokosari Enterprises for the month of October 2019.

KOKOSARI ENTERPRISES
SALES DAYBOOK

DATE	CUSTOMER	INVOICE NUMBER		TOTAL AMOUNT	WOODEN CHAIRS	WALL CLOCK
DATE	CUSTOMER			N	N	N
2/10/19	DON &SONS	1007	SL	17,200	12,000	5,200
4/10/19	MAMMY Enterprises	1008	SL	25,000	25,000	0
6/10/19	SUNNY & SONS	1009	SL	99,750	38,000	61,750
7/10/19	KAOKAO Enterprises	1010	SL	2,600	0	2,600
8/10/19	SUNLOLA Ventures	1011	SL	13,000	0	13,000
15/10/19	HANNAH Ventures	1012	SL	187,680	92,000	95,680
	Transfer to sales account			345,230	167,000	178,230

Notes

i. The analysis would help the managers access the rate at which each class of stock is sold for efficient management of the business

ii. Where trade discounts were given, the effects were distributed on a pro-rata basis between the two classes of goods sold. E.g.,

   Wooden chairs ₦40,000 – (₦40,000 X 5%)

Wall clocks ₦65,000 - (₦65,000 X 5%)

9.6 Trade Discount

This is a discount given to a trader buying in large quantities. The invoice price would be the same for all customers, but the net selling price may be different for customers depending on the quantity purchased by them.

9.7 Purchases Daybook

This is the book that is used to record all credit purchases at regular intervals. The necessity for this book is borne out of the voluminous daily purchases which unnecessarily overload the ledger if posted directly. All purchases on credit may be on a weekly basis are recorded into the purchases daybook and the total therein is transferred to the purchases ledger account as a debit entry while the credit entry will go to the creditors/payables accounts.

Illustration 1

MANNY ENTERPRISES made the following purchases on credit;

1/8/2020	M'S Kenny	₦150,000 with invoice No. 1015
	M Akolade & Sons	₦108,000 with invoice No. 0890
4/8/2020	Saidi Yusuf	₦60,000 with invoice No 0895
	Waheed Sunshine	₦82,800 with invoice No. 0899
	Hakilu & Sons	₦98,250 with invoice No. 0880
7/8/2020	Onuh Paul	₦120,000 with invoice No. 0918
	D' Young &Sons	₦67,500 with invoice No. 0920
	Femstar Enterprises	₦337,500 with invoice No 0665

Required:

Enter the transactions in the purchases daybook of Manny Enterprises.

Solution 1

MANNY ENTERPRISES
PURCHASES DAYBOOK

Date	Supplier	PL Ref	Amount ₦
1/8/2020	M'S Kenny	PL	150,000
	M Akolade & Sons	PL	108,000

4/8/2020	Saidi Yusuf	PL	60,000
	Waheed Sunshine	PL	82,800
	Hakilu & Sons	PL	98,250
7/8/2020	Onuh Paul	PL	120,000
	D' Young & Sons	PL	67,500
	Femtar Enterprises	PL	337,500
31/8/2020	Transfer to Purchases Ledger		1,024,050

9.8 Sales Returns Book or Journal

As earlier said, from the sales earlier made, returns may be made due to many reasons. The implication of sales return is to decrease the total sales figure by the amount returned and, in most cases, reduce the earlier reported profit if the returns were made after the final accounts have been prepared.

Illustration 1

Let us refer to illustration 1 (sales daybook)

KOKOSARI ENTERPRISES

6/10/19	DON & SONS returned 6 wooden chairs
8/10/19	MAMMY Enterprises returned 4 wall clocks
10/10/19	SUUNY & SONS returned 2 wooden chairs

Required:

Prepare the sales returns book for Danlami Enterprises

Solution 1

KOKOSARI ENTERPRISES

Sales Returns Daybook

Date	Particulars	Sales Ledger Ref	Amount ₦
6/10/19	DON& SONS 6 wooden chairs		3,000
8/10/19	MAMMY Enterprises 4 wall clocks		2,392

10/10/19	SUUNY & SONS		
	2 wooden chairs		1,000
	Transfer to sales return	GL	6,392

Notes (workings on Trade Discount)

9.9 Purchases Returns Book or Journal

After purchasing or taking delivery of goods ordered, it may be possible to return part of the goods received, back to the seller or supplier. The purchaser had been debited for the total value of goods dispatched. Immediately, the seller agrees to the returns, the arrangement becomes a complete transaction, and the accounts of the debtor/receivable must be credited to reduce the liability therein.

Illustration 1

Refer to the illustration on PURCHASES DAYBOOK.

The following returns were made by MANNY ENTERPRISES

			₦
10/8/2020	M'S Kenny	PL	15,000
12/8/2020	M Akolade & Sons	PL	18,000
14/8/2020	Saidi Yusuf	PL	6,000
16/8/2020	Waheed Sunshine	PL	8,280

Required:

Prepare the purchases returns book for MANNY ENTERPRISES

Solution 1

MANNY ENTERPRISES

Return Outwards Book

Date	Supplier		Amount N
10/8/2020	M'S Kenny	PL	15,000
12/8/2020	M. Akolade & Sons	PL	18,000
14/8/2020	Saidi Yusuf	PL	6,000

16/8/2020	Waheed Sunshine	PL	8,280
Transfer to Returns outward account		GL	47,280

9.10 Journal

This is a chronological record of business transactions. The information recorded about each transaction includes the date of the transaction, the debit and credit changes in specific ledger accounts, and a brief explanation of the transaction. The journal is used as the book to record transactions that do not fit into other subsidiary books. The information recorded in the journal about each transaction includes:

- The date of the transaction
- The debit and credit changes in specific ledger account
- A brief explanation of the transaction is referred to as narration or narrative.

The narration is required to indicate the purpose and authority of the transaction and for efficient use of the journal, candidates must be able to analyse the effect of a transaction on assets, liabilities and owner's equity.

9.10.1 Uses of the Journal

The following are the uses of the Journal

- Opening and Closing entries
- Transfer from one account to the other
- Purchases and sales of fixed assets on credit
- Correction of errors
- End-of-the-period adjustments.

9.10.2 Layout of Journal

The Journal

Particulars	folio	Dr	Cr
The name of account to debit		XXX	
The name of account to credit			XXX
The Narration			

Note:

The name of the account to be debited is always shown first. The name of the account to credit is credited to the right-hand side of the account. The narration is not indented. A blank space should be left after each entry to make each set of journal entries stand out clearly.

Illustration on uses of Journal

The following transactions *t*ook place in the books of Honeywell Ltd in June 2019

i. A machine is bought on credit from Jenny Enterprises for ₦372,000 on June 19th
ii. A motor vehicle is sold to Jeje-laye on credit for ₦720,000 0n June 21st
iii. Babetee. P a debtor owed ₦320,000. He offers a motor car in full settlement of the debt in June
iv. 17th and the offer was accepted.
v. Ilemobayo is a creditor. On June 22nd, his business is taken over by Pumppy Ventures to which the debt of ₦90,000 is now to be paid.

Required:

Show the Journal entries to record the transactions.

SOLUTION

HONEYWELL LIMITED

JOURNAL

Date	Description	DR	CR
2019		₦	₦
19/06	Machinery	372,000	
	Jenny Enterprises		372,000
Being Machinery bought on credit			
21/06	Jejelaye	720,000	
	Motor Vehicle		720,000
Being Motor Vehicle sold on credit			
17/06	Motor Car	320,000	
	Babatee		320,000

Being settlement of debt with a motor car

22/06	Ilemobayo	90,000	
	Pumppy Ventures		90,000

Being debt owed to ilemobayo to be paid to Pumppy Ventures.

9.11 Cashbook

The cashbook is an extension of the ledger which consists of the cash and bank account combined in a single book. The cashbook serves a dual purpose of being principal books of account as well as subsidiary books. The motive for combining cash and bank accounts is that they deal with receipts and payments. The cashbook can be a;

i. Single-column cashbook: This comprises either cash or bank transactions
ii. Double-column cashbook: This is made up of both cash and bank transactions
iii. Three-column cashbook: This is made up of cash, bank and cash discounts.

9.12 Cash Discount

The discount column provided on the debit side is used to record the discount allowed while the one on the credit side is for the discount received. The discount columns are memorandums only; they are not part of the double-entry system. They are not balanced but totalled and the respective total figures are entered in the appropriate discount accounts in the general ledger.

9.13 Contra Enterprises

This is a transaction affecting both cash and bank accounts, which is the double-entry completed in the cash book and is said to have a contra entry.

Illustration 1 (involving 2 columns cashbook)

The following transactions took place in the firm of ANDY COLE ENTERPRISES in the month of May 2020.

1/5 Started business with capital in cash NI00,000
2/5 Paid rent of shop by cash ₦10,000
3/5 Latifat lent the business ₦50,000,
4/5 Opened a bank account with ₦50,000. Paid Lawal by cheque ₦20,000
5/5 Sales in cash ₦9,800

7/5 Funke paid us by cheque ₦6,200
9/5 Paid Bulus, a creditor in cash ₦22,000
11/5 Cash sales paid into bank ₦55,000
13/5 Sold goods on credit to Dominica ₦15,000
15/5 Moruf paid us in cash ₦6,500
16/5 Cash paid into the bank ₦40,000
19/5 Repaid Latifat ₦30,000 by cheque
22/5 Cash sales paid directly into the bank ₦10,000
27/5 Paid motor expenses by cheque ₦3,000
28/5 Bought goods from Wale on credit ₦20,000
29/5 Drew cheque for self ₦20,000

Required; Write up a Two-column cashbook from the above details and balance off as of the end of the month in the books of ANDY COLE ENTERPRISES.

Solution 1

ANDY COLE ENTERPRISES

2 –COLUMNS CASHBOOK FOR THE MONTH OF MAY 2020

Date 2020	Details	CASH ₦	BANK ₦	DATE 2014	DETAILS	CASH ₦	BANK ₦
1/5	capital	100,000		1/5	Rent	10,000	
3/5	Loan	50,000		4/5	Bank	50,000	
4/5	Cash		50,000	4/5	Lawal		
5/5	sales	9,800		9/5	Bulus	22,000	
7/5	Funke		6,200	16/5	Bank	40,000	
11/5	sales		55,000	19/5	Loan		30,000
15/5	Moruf	6,500		27/5	Motor Expenses		3,000
16/5	Cash		40,000	29/5	Drawings		20,000
22/5	sales		10,000	31/5	Bal c/d	44,300	108,200
		166,300	161,200			166,300	161,200

ILLUSTRATION 2 (CASHBOOK WITH THREE COLUMNS)

Enter up a three–column cashbook from the following details in the books of HANDY CAFÉ for the month of January 2020. Balance off at the end of the month, and show the relevant discount accounts, as they would appear in the general ledger.

1/1 Started business with ₦600,000 in the bank. Bought fixtures paying by cheque ₦100,000; and goods by cheque ₦120,000

4/1 Cash sales ₦40,070. Paid rent in cash ₦20,000. Monic paid us her account of ₦22,000 by cheque of ₦21,000, we allowed her a ₦1,000 discount.
7/1 Paid Tope & Co ₦8,000 owing to them by means of a cheque ₦7,600; they allowed us ₦400 discount.
9/1 We received a cheque for ₦38,000 from Ajala, discount having been allowed ₦2,000; Paid rates by cheque ₦20,000.
14/1 Caleb paid us a cheque for ₦11,500 as the final settlement of the ₦12,000 debt.
16/1 Paid Lartey his account of ₦12,000 by cash ₦11,400, have deducted ₦600 cash discount.
20/1 Esther paid us a cheque for ₦7,800, having deducted ₦200 discount.
24/1 Cash sales paid directly into the bank ₦10,000
27/1 Drew cheque for potential purchase ₦15,000
28/1 Drew cheque for his daughter's school fees ₦16,000.

SOLUTION 2

HANDY CAFÉ

3 – COLUMN CASHBOOK FOR THE MONTH OF JANUARY 2020

DATE	DETAILS	DISC ALLOWED	BANK	CASH	DATE	DETAILS	DISC RECD	BANK	CASH
2020		₦	₦	₦	2020		₦	₦	₦
1/1	Capital		600,000		1/1	Fixtures		100,000	
4/1	Sales			40,070	1/1	Purchases		120,000	
4/1	Monic	1,000	21,000		4/1	Rent			20,000
9/1	Ajala	2,000	38,000		7/1	Tope & Co	40	7,600	
14/1	Caleb	500	11,500		9/1	Rates		20,000	
20/1	Esther	200	7,800		16/1	Lartey	60		11,400
24/1	Sales		10,000		27/1	Cash C		15,000	
27/1	Bank C			15,000	28/1	Drawings		16,000	
					31/1	Bal c/d		409,700	
		3,700	688,300	55,700			100	688,300	
½	Bal b/d		409,700	24,300					

Revision Questions

Multiple Choice Questions

1. A journal entry that is used to recognise revenues and expenses that have been earned, and for which the related cash amounts have not yet been received is called -------

   (a)prepaid (b)income (c)accrual (d)expense

2. Those books into which economic transactions are recorded on a daily basis from the source documents are referred to as-----------------

   (a)journal proper (b)books of original entry (c)cash book (d)purchase daybook

3. Any form of paper record that is produced as a direct consequence of a financial transaction is described as?

   (a)Bank statement (b)Cash slip (c)Source document (d)Supplier invoice

4. Those books into which economic transactions are recorded on a daily basis from the source documents are referred to as-----------------

   (a)journal proper (b)books of original entry (c)cash book (d)purchase daybook

5. In accounting, mistakes may be the ones relating to routine and principle. They may occur in entering the transactions in the------------------

   (a)assets register (b)ledger (c)journal (d)cash book

6. Journal list transactions in which order?

   (a)Decreasing (b)Chronological (c)Alphabetical (d)Increasing

7. Among these statements, which one is **not** correct about journal entry?

   (a)The debited account titles are listed first (b)Journal entries show the effect of transactions (c)Each Journal entry should begin with a date (d)Journal entries provide account balances

8. Journal is also called?

   (a)A daybook (b)History book (c)Ledger book (d)Entry book

9. Which one of the following is called the book of original entry?

   (a)Receipts and Payment accounts (b)Trial Balance (c)General journal (d)General Ledger

10. Purchase returns journal is also known as................. (a)Return outward daybook (b)Return inward daybook (c)Purchases daybook (d)Sales daybook

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
C	B	C	B	C	B	D	A	C	A

Theory Questions

1. Write up the various daybooks that can be found in the following transactions that exist in the Books of JONATHAN FURNITURE ENTERPRISES

   May 2 2020: Purchased on credit from OYINLOLA P.
   30 tons of 'A' type nails @ ₦1,200 per ton
   100 tins of wood polish @ ₦80 each
   50 tins of glue @₦150 per tin
   160 meters of Rexine @ ₦20 per meter

   May 4 2020: Sold on credit to ONITOOLO D.
   8 wooden chairs @₦600 each
   6 Cain chairs @₦300 each
   4 wall clock shelves @1,200 each
   A 10% discount is allowed on chairs.

   May 6 2020 JONATHAN returned the following items to OYINLOLA P.
   22 meters of Rexine
   5 tins of wood polish because the life span has expired.

2. State the advantages of books of Prime entry over ledger accounts.
3. HENRY STEPHEN BROTHERS commenced the business on 1/3/2020 with cash at Bank of ₦10,000

   The following transactions took place during the month.

		₦
March 1:	Bought goods from ISAAC W.	10,000
	Purchased Warehouse fitting for cash	1,600
March 2:	Sold goods to T. Thornado	3,200
	Drew cheque for petty cash	800
March 3:	Paid Isaac W. on account	6,000
March 4:	Sold Goods to Bayo A	4,000
March 5:	Received cheque from T. Thornado	3,080
	Allowed him discount	120
March 6:	Drew cheque for wages	280
March 8:	Bought goods for cash	1,200

March 9:	Sold Goods to Baboje D.	6,800
March 10:	Purchased Goods from Dada	5,200
March 11:	Paid Isaac in settlement	3,800
	Discount allowed by him	200
March 12:	Paid carriage on goods sold	80
March 13:	Drew cheque for wages	280
March 14:	Bought goods from Isaac W.	6,000
March 14:	Bought goods for cash	1,600
March 16:	Sold goods to Bayo A	7,200
March 17:	Banjo A Paid on account	8,000
March 18:	Purchases goods from Matin	3,000
March 19:	Sold goods for cash	3,680
March 20:	Drew cheques for wages	280
March 21:	Sent cheques to Matin	2,880
	Discount allowed by him	120
March 22:	Sold goods to T. Thornado	5,200
March 23:	Bought goods from Isaac W.	9,600
March 24:	Bought goods for cash	2,920
March 25:	Sent cheque to Isaac W	8,000
March 26:	Received from T.Thornado on account	4,000
March 27:	Drew cheque for wages	280
March 28:	Paid Electricity bill	200
March 28:	Paid Rent	320
March 29:	Henry Stephen drew from Bank for private use	600

Required:
Enter the above transactions in the proper books.

CHAPTER TEN

PETTY CASHBOOK / IMPREST SYSTEM

10.1 Learning Objectives

A the end of the chapter, the students should be able to know and understand the;

i. Meaning of petty cashbook
ii. Uses of petty cashbook
iii. Meaning of imprest system
iv. Advantages of imprest system

10.2 Introduction

The petty cash book is one of the prime books of entry, which is a sub-division of the cash book, which is usually given to a junior member of the staff to keep. The keeper is usually called ''PEETY CASHIER''. It is his duty to debit this book with cash received from the cashier or the accountant and credit it with all disbursements made for which he will secure the vouchers. The petty cashbook usually has several columns on the credit side to record the various classes of petty expenses. The petty expenses columns are totalled periodically and posted to the relevant expenses account in the general ledger.

10.3 Imprest System

The petty cashbook is maintained on an imprest system basis. The basic idea of this system is that the cashier or the accountant gives the petty cashier an adequate amount of cash called FLOAT to meet his needs for the ensuing period. At the end of the period, the cashier or the accountant ascertains the amount spent by the petty cashier and gives him an amount equal to that spent. The petty cash in hand should then be equal to the original amount with which the period was started.

10.4 Uses of Petty-cashbook

i. It records all the petty expenses incurred in the organisation
ii. It avoids the inconvenience of using checks to make small payments
iii. It assists in updating cash transaction records and allows the division of labour in an organisation.

iv. It provides information on small payments made to meet certain expenses
v. It can be used to control petty expenses since it allows for a comparison of the petty expenses incurred between two periods.
vi. Small businesses such as restaurants find petty cash log important because it avails funds that can be used to meet unpredictable shortfalls.

10.5 Advantages of Petty Cashbook

1. **Labour minimisation:** Compared to other petty cash systems, the imprest system is not labour intensive and easy to do. Therefore, in this method, the workload of cashiers is minimised significantly.
2. **Better control over petty expenses:** In this petty cash system, the petty cashier will submit a statement of expenditure for approval at the end of a set period. The head cashier can check and verify the expenses and easily prevent fraud. This way, the head cashier will know where the money is and have better control over all those expenses.
3. **Easy to verify:** The verification process in the imprest petty cash system is pretty straightforward. At any point in time, if the chief cashier has any doubt regarding the petty expenses, he can always refer and verify using the imprest petty cash book.
4. **Fixed funds:** In this method, the head cashier is always aware of the amount provided for petty cash. This helps the head cashier close the account quickly.
5. **Prevent expense fraud:** In the imprest system, the head cashier controls petty cash. Since the expenses are checked regularly, and the accounts are submitted promptly, this method’s chances of expense fraud are non-existent.
6. **Petty cashiers can work comfortably:** Since the petty cashier does not have to collect, he can now make the small expense recording more accurate.
7. **Determination of expenses:** In this, the finance team can be sure of the number of expenses of the same nature for a particular period. This can help greatly in petty cash budgeting.

10.6 Disadvantages of Petty Cashbook

1. Since there’s a lack of documentation, accounting errors are very common in petty cash systems.

2. If there are no limits set on the expenses, there is a high possibility of overspending.
3. This method has a high chance of theft of petty cash by employees. And it will be difficult to track the source.
4. This method is outdated and inefficient and is not suitable for large businesses.

Illustration 1

Nnamdi operates his petty cash account on the imprest system. It is maintained at a figure of ₦10,000, and the reimbursement of the imprest is done on the first day of each month. On 30 April 2019, the petty cash box held ₦3,874 in cash. In May 2014, the following petty cash transactions arose:

	₦
May: 1 cash received to restore imprest	?
‘’ 2 stationery	484
‘’ 4 Bus fare to Sango otta	126
‘’ 7 Postage stamps	340
‘’ 8 Window cleaning	190
‘’ 11 correcting fluid	270
‘’ 11 Motor tax	970
‘’ 11 Bus fare to Owode	690
‘’ 15 Paper Clips	90
‘’ 15 Newspapers	400
‘’ 16 Photocopier repair	360
‘’ 20 Drawing pins	90
‘’ 22 Photocopier paper	1,040
‘’ 23 Wages of Office Cleaner	400
‘’ 25 Wrapping paper	160
‘’ 27 Sellotape	170
‘’ 27 Fuel for vehicles	400
‘’ 27 Electric bulb	180
‘’ 28 Typewriter repairs	860
‘’ 28 Bus fares to Victoria Island	180
‘’ 30 Stationery	320
‘’ 30 Cleaning materials	240

You are required to enter the above transactions in a Petty cash Book, having analysis columns for Postage and stationery, Traveling, Cleaning, Motor and General Expenses.

You are to show the reimbursement of the imprest on 1st June 2019.

Solution 1

NNAMDI ENTERPRISES

PETTY CASHBOOK FOR THE MONTH OF MAY 2019

Amt	Date	Details	Amt	Postages	Travelling	Cleaning	Motor	General Expenses
₦	2019		₦	₦	₦	₦	₦	₦
3,874	1/05	Bal b/d	-	-	-	-	-	-
6,126	1/05	Bank	-	-	-	-	-	-
-	2/05	Stationery	484	484	-	-	-	-
-	4/05	Bus fares	126	-	126	-	-	-
-	7/05	Stamps	340	340	-	-	-	-
-	8/05	Cleaning	190	-	-	190	-	-
-	11/05	Correcting fluid	270	270	-	-	-	-
-	11/05	Motor Tax	970	-	-	-	970	-
-	11/05	Bus fare	690	-	690	-	-	-
-	15/05	Paper clip	90	90	-	-	-	-
-	15/05	Newspapers	400	-	-	-	-	400
-	16/05	Repairs	360	-	-	-	-	360
-	20/05	Pins	90	90	-	-	-	-
-	22/05	Printing paper	1040	1040	-	-	-	-
-	23/05	Cleaner	400	-	-	400	-	-
-	25/05	Paper	160	160	-	-	-	-
-	27/05	Sellotape	170	170	-	-	-	-
-	27/05	Fuel	400	-		-	400	-
-	27/05	Bulb	180	-	-	-	-	180
-	28/05	Repairs	860	-	-	-	-	860
-	28/05	Bus fares	180	-	180	-	-	-
-	30/05	Stationery	320	320	-	-	-	-
-	30/05	Cleaner	240	-	-	240	-	-
				2,964	996	830	1,370	1,800
	31/05	Bal c/d	2,040	Trf to GL	Trf to GL	Trf to GL	Trf to GL	Trf to GL
10,000			10,000					
2,040	1/06	Bal b/d	-	-	-	-	-	-
7,960	1/06	Bank	-	-	-	-	-	-

Revision Questions

Multiple Choice Questions

1. A three-column cash book records cash, bank and---------------
   (a) Purchases and sales (b)Creditors and debtors (c)Discount allowed and received (d)Prepayments and accrued
2. In setting up an imprest system, the main cashier gives the petty cashier an amount to meet petty cash needs for a specific period. The amount given is classified as-----------
   (a)cash at hand (b)Imprest (c))petty cash (d)petty cash float
3. The little expenses incurred for the day-to-day running of the organisation are called...........
   (a)expenditure (b)marketing expenses (c)petty expenses (d)cash book
4. Any form of paper record that is produced as a direct consequence of a financial transaction is described as?
   (a)Bank statement (b)Cash slip (c)Source document (d)Supplier invoice
5. Those books into which economic transactions are recorded on a daily basis from the source documents are referred to as----------------- (a)journal proper (b)books of original entry (c)cash book (d)purchase daybook
6. When cash taken from the till is banked. The transaction is referred to as-------- an entry
   (a)bank (b)till (c)contra (d)debit
7. Another name for the "petty cash" system is-----------------
   (a) Impress (b)Imptress (c)Impasse (d) Imprest

Use the following information to answer questions 8 and 9 below:

The main cashier reimbursed the petty cashier with ₦400,000 on 1st March 2021. The following expenses were incurred and paid for:

i. Postages ₦27,500
ii. Stationery ₦78,500
iii. Motor repairs ₦79,500
iv. Entertainment ₦25,400

8. The calculated cash at hand with the main cashier was …………

   (a) ₦75,000 (b)₦125,400 (c)₦189,100 (d)₦201,900

9. ……… will be reimbursed by the main cashier at the end of the period.

   (a)₦105,000 (b)₦210,900 (c)₦345,000 (d)₦350,500

10. Trade discount is recorded in the ……

    (a)cash book (b)purchases daybook (c)general ledger (d)invoices.

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
C	D	C	C	B	C	D	C	B	D

Theory Questions

ABC operates his petty cash account on the imprest system. It is maintained at a figure of ₦100,000, and the reimbursement of the imprest is done on the first day of each month. On 30th June 2020, the petty cash box held ₦3,874 in cash. During June 2020, the following petty cash transactions arose:

	₦	
June: 1 cash received to restore imprest		?
‘’ 2 stationeries	4,840	
‘’ 4 Bus fare to Sango otta		1,260
‘’ 7 Postage stamps		3,400
‘’ 8 Window cleaning	1,900	
‘’ 11 correcting fluid		2,700
‘’ 11 Motor tax	9,700	
‘’ 11 Bus fare to Owode	6,900	
‘’ 15 Paper Clips	900	
‘’ 15 Newspapers	4,000	
‘’ 16 Photocopier repair	3,600	
‘’ 20 Drawing pins	900	
‘’ 22 Photocopier paper	10,400	
‘’ 23 Wages of Office Cleaner	4,000	
‘’ 25 Wrapping paper		1,600
‘’ 27 Sellotape	1,700	

‘’	27 Fuel for vehicles	4,000
‘’	27 Electric bulb	1,800
‘’	28 Typewriter repairs	8,600
‘’	28 Bus fares to Victoria Island	1,800
‘’	30 Stationery	3,200
‘’	30 Cleaning materials	2,400

You are required to enter the above transactions in a Petty cash Book, having analysis columns for Postage and stationery, Traveling, Cleaning, Motor and General Expenses.

You are to show the reimbursement of the imprest on 1st July 2020.

CHAPTER ELEVEN

DOUBLE-ENTRY SYSTEM

11.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. Theoretical bookkeeping
ii. Double-entry system and its importance
iii. Classification Ledger
iv. Various classifications and types of accounts
v. The importance of Ledger

11.2 Introduction

In bookkeeping and accounting, a ledger is a book (or record) for collecting business transaction data from a journal and organizing entries by account. The ledger provides information on the current balance in each account throughout the accounting period. At the end of the period, the ledger becomes the primary and authoritative source of data for building a firm's financial accounting reports, including the income statement and balance sheet.

The ledger is a device used to record and summarise increases and decreases of a financial variable. It is a means of accumulating information needed by management in directing the business, it records the increases and decreases in a single balance sheet item. A ledger is an accounting book that facilitates the transfer of all journal entries in a chronological sequence to individual accounts. The process of recording journal entries into the ledger is called posting. Hence, it contains the record of all the financial transactions of a business, appropriately grouped to facilitate the Ledgers including:

i. Loose Ledgers
ii. Computer Stored ledger on magnetic tape

T-Account

Ledger accounts use the T-account format to display the balances in each account. Each journal entry is transferred from the general journal to the corresponding T-account. The debits are always transferred to the left side and the credits are always transferred to the right side of T-accounts.

It has only three elements:

i. Title;
ii. A Left side (i.e., Debit side);
iii. A Right side (i.e., Credit side)

11.3 Classification of Ledgers

This is the division of ledgers into suitable classes in order division of labour among ledger clerks, it also permits the double-entry principle recording of entries in the accounts

Type of Ledgers	Collection information from
1. General Ledger	The general ledger accumulates information from journals. Each month all journals are totalled and posted to the General Ledger. The purpose of the General Ledger is therefore to organise and summarise the individual transactions listed in all the journals.
(a) Private Leaders	This is a general ledger that holds Capital accounts, Drawings account of the proprietor, Loan account, Trading, Profit and Loss account and any other ledger which relates to the ownership of the business.
(b) Impersonal Ledgers	This is a ledger which is not in the names of persons, businesses and firms. The ledger is further subdivided into two:
Real Ledgers	This consists of ledgers referring to Tangible property and possessions of the business that have a physical presence such as Land, Buildings, Machinery, Furniture and Fittings, Inventory of goods, Bank, Cash, etc
Nominal Ledgers	This consists of ledgers relating to income and expenditure, gains and Losses of a business such as Wages, Salaries, Discounts, Depreciation, Rates, Rent, Interest, Dividend, Insurance, etc.
Revenue Ledgers	This consists of ledgers relating to income and expenditure, gains and Losses of a business such as Wages, Salaries, Discounts, Depreciation, Rates, Rent, Interest, Dividend, Insurance, etc.

	This is the entire amount of income made through the sale of goods/services and is sometimes referred to as Income or Sales, depending on the nature of the goods/ services being sold, companies track this account either as one & a big account (e.g., Sales) or as many separate accounts (e.g., Sales Prod I, Sales Prod 2. Freight Income etc,), Revenue accounts normally have a Credit (right side) balance, and therefore a credit to a revenue account signifies an increase in its amount, while a debit (left side) indicates a decrease in the revenue amount, A decrease of revenue would take place in circumstances such as for example sales returns and discounts (explained further down)
Expenses Ledgers	These are the general costs of doing business. This would include operating expenses such as Salaries expenses, rent expenses and advertising expenses, as well as non-operating expenses such as loss on sale of assets. Expense accounts normally have a debit (left side) balance. In transaction entries, a debit to an expense account signifies an increase in its amount, while a credit indicates a decrease (which rarely occurs, unless an error needs to be corrected).
2. Personal Ledgers	These are ledgers in the names of persons, companies and firms. This group is further divided into "Receivable' and Payable' Ledgers."
(a) Trade Receivables Ledgers	The receivables ledgers accumulate information from the sales journal. The purpose of the receivables ledger is to provide knowledge about which customers owe money to the business, and how much. More information on receivables ledger.
Trade Payables Ledgers	The payables ledgers accumulate information from the purchases journal. The purpose of the payables ledger is to provide knowledge about which suppliers the business owes money, to and how much.

Account name	Debit/Credit balance	Type of account
Fixtures and fittings	Normally debit balance	Asset account
Salaries	Normally debit balance	Expense account
Legal and professional expenses	Normally debit balance	Expense account
Revenue reserves	Normally credit balance	Equity account.

Share capital	Normally credit balance	Equity account
Trade receivables	Normally debit balance	Asset account
Trade payables	Normally debit balance	Liability account
Hire purchase payables	Normally debit balance	Liability account
Shop takings	Normally debit balance	Revenue/Income account
Goods sold	Normally debit balance	Revenue/Income account

Balancing Ledgers

T-account Notice that these are account balances, not column balances. The total difference between the debit and credit columns will be displayed at the bottom of the corresponding side. In other words, an account with a credit balance will have a total on the bottom of the right side of the account.

The steps involved in balancing a ledger are:

1. Add all the entries on the debit (left) side of the ledger to obtain the total
2. Add all the entries on the credit (right) side of the ledger to obtain the total.
3. Find the difference between the two totals obtained in (1) and (2) above, known as 'Balance carried down.
4. Put the Balance carried dow₦1 below the last entry on the lower total between steps (i) and (2) above. At this point, both the left and right totals will now be the same.
5. Transfer the 'Balance carried down' below the total of the adjacent side naming it 'Balance brought down'.

Note:

Where the debit total is higher than the credit total, the ledger is said to have a debit balance' but where the credit total is higher than the debit total, the ledger is said to have a 'credit balance[1]. Hence, ledger balances are named based on the higher entries.

11.4 Classifications of Accounts

There are two broad classifications of accounts. These are Personal Accounts and Impersonal Accounts.

11.4.1 Personal Accounts

Personal accounts are the accounts of persons, natural or corporate, who have business dealings with the organisation. The personal accounts comprise Receivables accounts, Payables 'accounts, Capital accounts, drawings accounts and Bank accounts.

11.4.2 Impersonal Accounts

Impersonal accounts are the accounts of non-persons. Impersonal accounts are further subdivided into Real accounts and Nominal accounts.

Real Accounts relate to tangible assets such as buildings, motor vehicles, furniture and Inventory. Nominal accounts relate to revenue/incomes, expenses and intangible assets. Examples of Nominal accounts are:

11.4.3 Revenue Accounts

i. Sales Account
ii. Commission Received account
iii. Discount received account
iv. Interest received account

11.4.4 Expenses Accounts

a. Salaries and wages account
b. Rent account
c. Transport and travelling account
d. Printing and stationery account
e. Purchases account
f. Depreciation account
g. Repairs and maintenance account

11.4.5 Intangible Assets Accounts

(i) Goodwill account
(ii) Patents and Trademarks account

Illustration 1

On 1st August 2019, Koko Lateef decided to set up a business which would trade under the name of Koko Enterprises. The following are the transactions of the business for the month of August 2019.

2015 August	1	A cash of ₦250, 000 was paid into the business by Koko Lateef.
	2	A bank account was opened for the business and ₦200,000 of the cash in hand was deposited into the bank account opened.
		Paid rent of premises by cheque ₦40,000
	5	Bought goods ₦18,500 and paid by cheque.
	9	Bought goods ₦26,000 on credit from John.
	13	Sold goods ₦2,600 for cash
	18	Returned unsatisfactory goods ₦1,400 to John
	21	Paid advertising expenses ₦900 in cash
	25	Received commission ₦500 in cash
	28	Paid the amount owing to John by cheque
	28	Koko Lateef withdrew ₦1,000 from the bank for personal use.

Required:

i. Identify the transactions involved and state the steps involved to record the entries.
ii. Enter the transactions in the books of Koko Enterprises for the month of August 2019.
iii. Balance the accounts opened and bring down the balances.

Cash Account

Date Particulars Amount	N	Date particular Amount	N
1/8/19 capital	250,000	2/8/19 Bank	200,000
13/8/19 Sales	26,000	21/8/19 Advert	900
25/8/19 Commission	500	31/8/19 Bal c/d	52,200
	276,500		276,500
1/9/19 Bal b/d	52,200		

Bank Account

Date particulars Amount		Date particular Amount	
2/8/19 Cash	200,000	3/8/2019 Rent	40,000
		5/8/19 Purchases	18, 500
		28/8/19 John	24,600
		29/8/19 Drawings	1,000

			31/8/19	Bal c/d	115,900
		200,000			200,000
1/9/19	Bal b/d	115,900			

John (Payable) A/C

18/8/19	Rent Out	1,400	9/3/19	Purchases	26,000
28/8/19	Bank	24,600			
		26,000			26,000

Capital Account

31/8/19	Bal c/d	250,000	1/8/19	Cash	250,000
			1/9/19	Bal b/d	250,000

Drawing A/c

29/8/19	Bank	1,000	31/8/19	Bal c/d	1,000
1/9/19	Bal b/d	1,000			

Rent A/C

3/8/19	Bank	40,000	31/8/19	Bal c/d	40,000

Purchases A/C

5/8/19	Bank	18,500	31/8/19	Bal c/d	44,500
9/8/19	John	26,000			
		44,400			44,500
1/9/19	Bal b/d	45,500			

Advertisement A/C

21/8/19	Cash	900	31/8/19	Bal c/d	900
31/8/19	Bal b/d	900			

Sales A/C

31/8/19 Bal c/d	2,600	13/8/19 Cash	2,600
		1/9/19 Bal b/d	2,600

Return Outwards A/C

31/8/19 Bal c/d	1,400	18/8/19 John	1,400
		1/9/19 Bal b/d	1,400

Commission A/C

31/8/19 Bal c/d	500	25/8/19 Cash	500
		1/9/19 Bal b/d	500

Illustration 2

2015 June	1	Jejelaye started a business with a capital of ₦100,000 which was paid into his business bank account.
	3	Purchased goods ₦40,000 on credit from Ben Ltd, paid rent ₦2,500 by cheque
	11	Sold goods ₦15,000 on credit to Local Stores.
	14	Withdrew ₦2,000 from the bank for office use.
		Paid advertising expenses of ₦600 in cash
	20	Paid Ben Ltd by cheque ₦30,000
	22	Cash sales was ₦7,500
	27	Jejelaye took ₦500 cash for his personal use.
		Bought fixtures ₦36, 000 and paid by cheque.

State the transactions and steps involved to record them.

Record the above transactions in the books of Jejelaye, balance the account on 30th June and bring down the balances.

Cash Account

14/6/x1 Bank	2,000	14/6/x1 Advert	6,000

22/6/x1 Sales	7,500	22/6/x1 Bank	800
		27/6/x1 Drawing	500
		30/6/x1 Bal c/d	400
	9,500		9,500
1/7/x1 Bal b/d	400		

Bank Account

1/6/x1 Capital	100,000	3/6/x1 Rent	2,500
22/6/x1 Cash	8,000	14/6/x1Cash	2,000
		20/6/x1 Ben Ltd	30,000
		30/6/x1 Bal c/d	73,500
	108,000		108,00
1/7/x1 Bal b/d	73,500		

Ben (Payable) Ltd

26/6/x1 Bank	30,000	3/6/x1 Purchases	40,000
30/6/x1 Bal c/d	10,000		
	40,000		40,000
		1/7/x1 Bal b/d	10,000

Local (Receivable) Stores A/C

11/6/x1 Sales	15,000	30/6/x1 Bal c/d	15,000
1/7/x1 Bal b/d	15,000		

Fixture Account

27/6/x1 Bank	36,000	30/6/x1 Bal c/d	36,000
1/7/x1 Bal b/d	36,000		

Purchases Account

3/6/x1 Ben Ltd	40,000	30/6/x1 Bal c/d	40,000
1/7/x1 Bal b/d	40,000		

Rent Account

3/6/x1 Bank	2,500	30/6/x1 Bal c/d	2,500
1/7/x1 Bal b/d	2,500		

Advertising Account

14/6/x1 Cash	800	30/6/x1 Bal c/d	800
1/7/x1 Bal b/d	800		

Capital Account

30/6/x1 Bal c/d	100,000	1/6/x1 Bank	100,000
		1/7/x1 Bal b/d	100,000

Drawing Account

27/6/x1 Cash	500	27/6/x1 Bal c/d	500
1/7/x1 Bal b/d	500		

Sales Account

30/6/x1 Bal c/d	22,500	11/6/x1 Local Stores	15,000
		22/6/x1 Cash	7,500
	22,500		22,500
		1/7/x1 Bal b/d	22,500

Illustration 3

Enter these transactions into the books of Yoyo & Sons. Use a two-column cash book (i.e., combine cash and bank accounts together in one account in the cash Book). Balance the account at the end of the period.

Feb	1	Amount introduced to the business by the owner. Cash ₦6,000, Cheque ₦2,000
	13	Bought goods on credit from N. Bassey ₦9,000.
	14	Cash sales to date ₦8,000
	18	Pay wages in cash ₦300

	23	Sold goods to KC. More on credit ₦3,000
	24	Received Cheque from K.C. More ₦1,380
	25	Bought motor van for cash ₦8,000
	26	Bought goods on credit from Joko & sons ₦7,000
	27	Bought goods on credit from Mukeke & co ₦3,000
Mar	1	Paid cash into bank ₦3,000
	6	Paid N. Bassey by cheque ₦2,000
	18	Bought good for cash ₦5,000
	20	Sold goods for cash ₦6,000
	22	Sold goods on credit ₦1,700 to Baba
	23	paid Motor expenses in cash ₦350
	24	Sold goods on credit to Yomi Johnson ₦10,000
	25	Withdrew cash from bank ₦200 for office use
	26	Received cheque from Baba ₦800
	27	Collected cash of ₦1,000 from K.c more
	28	Bought goods paying by cheque ₦2,000
	29	Bought furniture & fittings for ₦4,500 from Kako & Sons on credit.

Two-Column Cash Book

	Cash	Bank		Cash	Bank
1/2/x1 Capital	6,000	2,000	18/2/x1 Wages	300	=
14/2/x1 Sales	8,000	=	26/2/x1 Motor Van	8,000	=
24/2/x1 k.C. More	=	1,300	1/3/x1 Bank	3,000	=
1/3/x1 Cash	=	3,000	6/3/x1 N. Bassey	=	2,000
20/3/x1 Sales	6,000	=	18/3/x1 Purchases	5,000	=
25/3/x1 Bank	200	=	23/3/x1 Motor expenses	350	=
26/3/x1 Yomi Johnsons	=	7,000	25/3/x1 Cash	=	200
26/3/x1 Baba	=	800	28/3/x1 Purchases	=	2,000
27/3/x1 K.C. More	1,000	=	31/3/x1 Bal c/d	4,550	9,900
	21,200	14,100		21,200	14,100
1/4/x1 Bal b/d	4,550	9,900			

N. Bassey (Payable) A/c

6/3/x1 Bank	2,000	13/2/x1 Purchases	9,000
31/3/x1 Bal b/d	7,000		
	9,000		9,000
		1/4/x1 Bal b/d	7,000

Joko & Sons (Payable) A/c

31/3/x1 Bal c/d	7,000	26/3/x1 Purchases	7,000

		1/4/x1 Bal b/d	7,000

Mukeke & co (Payable) A/c

31/3/x1 Bal c/d	3,000	273/x1 Purchases	3,000
		1/4/x1 Bal b/d	3,000

K.C. (Receivable) More

23/2/x1 Sales	3,000	24/2/x1 Bank	1,380
		27/3/x1 Cash	1,000
		27/3/x1 Bal c/d	620
	3,000		3,000
1/4/x1 Bal b/d	620		

Baba (Receivable) A/C

22/3/x1 Sales	1,700	26/3/x1 Bank	800
		31/3/x1 Bal c/d	900
	1,700		1,700

Yomi Johnson (Receivable) A/C

24/3/x1 Sales	10,000	26/3/x1 Bank	7,000
	____	31/3/x1 Bal c/d	3,000
	10,000		10,000
1/4/x1 Bal b/d	3,000		

Motor Van A/C

26/2/x1 Cash	8,000	31/3/x1 Bal c/d	8,000
1/4/x1 Bal b/d	8,000		

Furniture & Fittings A/C

29/3/x1 Kako & Sons	4,500	31/3/x1 Bal c/d	4,500
1/4/x1 Bal b/d	4,500		

Kako & Sons A/C

31/3/x1 Bal c/d	4,500	29/3/x1 Fur. & Fitt	4,500
		1/4/x1 Bal b/d	4,500

Capital A/c

31/3/x1 Bal c/d	8,000	1/2/x1 Cash	6,000

		1/2/x1 Bank	2,000
	8,000		8,000
		1/4/x1 Bal b/d	8,000

Wages A/C

18/2/x1 Cash	300	31/3/x1 Bal c/d	300
1/4/x1 Bal b/d	300		

Purchases A/C

13/2/x1 Bassey	9,000	31/3/x1 Bal c/d	26,000
26/2/x1 Joko & Sons	7,000		
26/2/x1 Mukeke & Co	3,000		
18/3/x1 Cash	5,000		
28/3/x1 Bank	2,000		
	26,000		26,000
1/4/x1 Bal b/d	26,000		

Motor Expenses A/C

23/3/x1 Cash	350	31/3/x1 Bal c/d	350

1/4/x1 Bal b/d	350

Sales A/C

31/3/x1 Bal c/d	28,700	14/2/x1 Cash	8,000
		23/2/x1 K.C. More	3,000
		20/3/x1 Cash	6,000
		22/3/x1 Baba	1,700
		24/3/x1 Yomi John	10,000
	28,700		28,700
		1/4/x1 Bal b/d	28,700

Revision Questions

Multiple Choice Questions

1. Receivables' Ledger will contain the accounts of credit-------------
   (a)suppliers (b)customers (c)individual (d)creditors
2. The cash sales of ₦400,000 took place and were recorded in the books of Emeka Enterprises in March 2020. The correct double-entry is?

	DR.	CR.
(a)	Sales Account	Cash Account
(b)	Cash Account	Sales Account
(c)	Cash Account	Bank Account
(d)	Bank Account	Cash Account

3. Describe the **TWO** accounting entries required to be recorded in each financial transaction as? (a)Prudence and Income (b)Assets and Materiality (c)Asset and Liability (d)Liability and Capital
4. The cash purchases of ₦450,000 took place and were recorded in the books of Sam Enterprises in July 2020. The correct double-entry is?

	DR	CR
(a)	Bank Account	Goods Account
(b)	Goods returns inwards	Cash Account
(c)	Purchases Account	Cash Account
(d)	Cash Account	Purchases on credit

5. State the correct entry to the transaction in the cash book: Paid cash into bank account ₦50,000.
   (a) Dr: Cash ₦50,000 (Bank column) : Cr: Bank ₦50,000 (Cash column)
   (b) Dr: Bank ₦50,000 (Cash column) : Cr: Cash ₦50,000 (Bank column)
   (c) Dr: Cash ₦50,000 (Cash column) : Cr: Bank ₦50,000 (Bank column)
   (d) Dr: Bank ₦50,000 (Bank column) : Cr: Cash ₦50,000 (Cash column)

6. The double-entry principles state that for…………
   (a) every receipt credit a ledger and debit all payments in another ledger
   (b) every debit entry in one ledger must have a corresponding credit entry in another ledger
   (c) nominal accounts record check fixed assets register
   (d) expenses details check real ledger
7. Cash withdrawal from business by the proprietor should be credited to____
   (a) Cash Account (b)Purchases Account (c)Capital Account (d)Drawing Account
8. …………. A/c is credited and ……… A/c is debited in case wages are paid for the construction of business premises:
   (a)Cash, wage (b)Cash, Premises (c)Premises, Cash (d)Wages, Cash
9. The cash sales of ₦400,000 took place and were recorded in the books of Emeka Enterprises in March 2020. The correct double-entry is?

	DR.	CR.
(a)	Sales Account	Cash Account
(b)	Cash Account	Sales Account
(c)	Cash Account	Bank Account
(d)	Bank Account	Cash Account

10. . ……………… reduces both assets and liabilities
   (a)Sales of goods on credit (b)Purchases of goods on credit
   (c)Cash paid to trade receivables (d)Cash received from trade payables

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
B	B	C	C	A	B	A	B	B	C

Theory Questions

1. Thomas Dunny started the business in September 2021. Record the following transactions in his books of account in double-entry form.

September 1: Started business with personal savings of ₦200,000 cash and ₦50,000 loan from Mr Earney who issued a cheque.
September 2: Paid ₦180,000 cash from the company cash box to the Bank.
September 5: Bought office fittings on credit from Binney & sons for ₦8,000
September 8: Bought a motor van for ₦5,600 paying by cheque
September 12: Bought office equipment for ₦15,000 on credit from Beta Nig. Coy.
September 15: Withdrew ₦75,000 from the bank and put in the company's cash till
September 17: Paid Binney & sons ₦7,500 by cheque while the balance was paid by cash
September 19: Repaid ₦27,000 cash as part of Loan taken from Mr Earney

2. The following balances appeared in the books of Biney Nig. Ltd on 01-01-2019

	N
Capital	14,850
Bank Loan	4,000
Premises	12,000
Machinery	6,500

Transactions on 1st month of 2019 were as follows:

Additional machinery worth ₦1250 was purchased on credit from M. Messi

6th : Sales of ₦375 by cheque made
8th : Part of Bank loan ₦500 was made by cheque
11th : A cheque of ₦3500 was received from part of the premises sold
14th : Salaries and wages paid by cheque ₦425
16th : Sales on credit ₦150 to Dr. Hashim Isa
22nd : Paid M. Messi the amount owed him by cheque
27th : Insurance premium of ₦50 by cheque

Required:

Open all the necessary T accounts, record the initial balances first and post the transactions into the accounts.

3. Write short notes on the following types of Accounts and give 10 examples in each case
   a. Nominal Account
   b. Real Account
   c. Personal Account

4.
   a. What is Ledger?

b. State the characteristics of a ledger.
c. Summarise the principle of double-entry in one sentence.

CHAPTER TWELVE

TRIAL BALANCE AND ADJUSTMENTS

12.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Meaning of trial balance
ii. Purpose of trial balance
iii. Ways of balancing ledgers
iv. Extraction of the trial balance

12.2 Introduction

A trial balance is a statement showing a list of balances in a double-entry form extracted from the ledgers to test the arithmetical accuracy of the accounts. The trial balance is drawn up at a given date after all the postings have been made in the ledgers. The totals of the debit and credit must be in agreement.

It is also a list of balances from the ledger accounts arranged in two columns of debit and credit to ascertain the arithmetical accuracy of the entries in the ledger account. Note that if the double-entry principle has been well applied, then the total of the debit entries must be equal to the total of the credit entries.

12.3 Rules for the Identification of Balances

a. All assets must be debited
b. All expenses must be debited
c. Reduction in capital should be debited
d. Reduction in liability should be debited
e. Reduction in income e.g., returns inwards should be debited
f. Abnormal provision should also be debited.
g. Capital must be credited
h. All liabilities must be credited
i. Reduction in fixed assets should be credited

j. Reduction in expenses e.g., should be credited
k. Normal provisions should be credited.

12.4 Purpose of Trial Balance

i. Provides a comprehensive list of all accounts, therefore, it saves time.
ii. It provides data for the preparation of Trading profit and loss and balance sheet
iii. It shows and tests the arithmetical accuracy of the entries in the ledger.

12.5 Procedures for Balancing the Ledgers and Trial Balance

i. Post all debit items
ii. Cast all the items on the debit side.
iii. Post all credit items
iv. Cast all the items on the credit side.
v. Compare the two totals
vi. If the debit side is greater, insert the difference on the credit side.
vii. If the credit side is greater, insert the difference on the debit side.

12.6 Nature of Trial Balance

The format of the trial balance is given below. It has columns for debit and credit entries, because of the principle of double-entry adopted, it must balance.

12.7 Trial Balance (Sample)

	DR ₦	CR ₦
Capital		xx
Non – current Assets:		
Plant and Machinery	xx	
Freehold premises	xx	
Equipment	xx	
Motor Vehicles	xx	
Furniture and fittings	xx	
Sales		xx
Purchases	xx	
Rent and rates	xx	
Wages and salaries	xx	
Inventory at beginning	xx	

Advertisement	xx	
Sundry expenses	xx	
Cash in hand	xx	
Cash at Bank	xx	
Bank overdraft		xx
Account Receivables	xx	
Account Payables		xx
Bad debts (written off)	xx	
Provision for doubtful debts		xx
Depreciation:		
Motor vehicles	xx	
Furniture and fittings	xx	
Carriage outwards	xx	
Carriage inwards	xx	
Returns inwards	xx	
Returns outwards		xx
Lightning	xx	
Discount allowed	xx	
Discount received		xx
Drawings	xx	
5% Loan		xx
	XXX	XXX

Illustration 1

KOKO LATEEF presents the following balances from the business transactions. Use the following balances brought down to prepare the Trial Balance for the period of 31st August 20X7.

	₦
Cash	52,200
Bank	115,900
Capital	250,000
Drawings	1,000
Rent	40,000
Purchases	44,500
Advertisement	900
Sales	2,600
Return outward	1,400
Commission	500

Solution 1

Koko Lateef

Trial Balance as of 31/8/X7

	Dr	Cr
	N	N
Cash	52,200	-
Bank	115,900	-
Capital	-	250,000
Drawings	1,000	-
Rent	40,000	-
Purchases	44,500	-
Advertisement	900	-
Sales	-	2,600
Return outward	-	1,400
Commission	-	500
	254,500	254,500

12.8 Extended Trial Balance

An extended trial balance is a trial balance which is used to effect adjustments on ledger balances for the purpose of drawing up the final accounts of an enterprise. The extended trial balance shows the pre-adjustment balances (as extracted from the ledger accounts and cash book), the adjustment entries and the post-adjustment (i.e., final) balances. Journals are raised in respect of the end –of-year adjustments and effected in the adjustment columns of the extended trial balance. The major advantage of an extended trial balance is that it shows the trial balance from the ledger balances to the final accounts' figures.

Illustration 2

The following trial balance was extracted from the books of Ocholi Enterprises as of 31st December 20X9.

	N	N
Capital on 1st January 20X9		45,214
Purchases	388,200	
Sales		522,900
Salaries and Wages	33,440	
Rent and rates	9,860	
Receivables	72,300	
Sundry expenses	4,142	
Bad debt	1,884	
Drawings	9,502	
Provision for doubtful debt		3,702
Bank	2,816	
Payables		34,308

Cash	334	
Inventory	82,124	
Motor car (at cost)	7,200	
Provision for depreciation on motor car		2,100
Discount received		1,500
Carriage inward	872	
Bank interest received		250
Commission received		2,700
	612,674	612,674

Additional Information:

i. Inventory on 31st December 20X9 was valued at ₦99,356.

ii. Rent prepaid on 31st December 20X9 amounted to ₦1,600

iii. Depreciation is to be provided on the motor car at the rate of 20% per annum.

iv. Salaries and Wages outstanding on 31st December 20X9 amount to ₦3,012

v. Commission not yet due but already received at the trial balance date was ₦400.

vi. Additional bad debt of ₦1,420 is to be written off.

vii. Bank interest of ₦50 has fallen due but is yet to be received.

viii. Provision for doubtful debt is to be adjusted to 5% of Receivables' balance.

ix. Drawings of goods costing ₦800 and cheques ₦1,200 by the owner are yet to be recorded.

Using an extended trial balance, you are required to prepare:

a. Statement of profit or loss for the year ended 31st December 20X9.

b. Statement of financial position as of that date.

Solution:

OCHOLI ENTERPRISES

Extended trial balance as of 31st December 20X9

	Ledger Balances (before adjustments)		Adjustments		Final Balances Statement of Profit or Loss	
	N	N	N	N	N	N
Capital on 1st January 20X9		45,214				
Purchases	388,204			(ix) 800	387,400	
Sales		522,900				522,9

Salaries and wages	33,440		(iv) 3,012		36,452	
Rent and rates	9,860			(ii) 1,600	8,260	
Receivables	72,300			(vi) 1,420		
Sundry expenses	4,142				4,142	
Bad debt	1,884		(vi) 1,420		3,304	
Drawings	9,502		(ix) 2,000			
Provision for doubtful debt		3,702	(viii) 158			
Bank	2,816			(ix) 1,200		
Payables		34,308				
Cash	334					
Opening Inventory	82,124		-	-	82124	-
Motor car (at cost)	7,200					
Provision for depreciation on motor car		2,100		(iii) 1,440		
Discount received		1,500				1,500
Carriage inward	872				872	
Bank interest received		250		(vii) 50		300
Commission received		2,700	(v) 400			2,300
Closing Inventory (Statement of profit or loss)				(i) 99,356		99,35
Closing Inventory (Statement of Financial Position)			(i) 99,356			
Prepaid rent			(ii) 1,600			
Depreciation			(iii) 1,440		1,440	
Accrued salaries				(iv) 3,012		
Commission received in advance				(v) 400		
Accrued bank interest			(vii) 50			
Decrease in provision for doubtful debt				(viii) 158		158
	612,674	612,674	109,436	109,436	523,994	626,5

12.8.1 Explanatory Notes on Extended Trial Balance

i. The Ledger balances represent the trial balance extracted from the ledger accounts and cash book before any adjustment is made.

ii. The adjustments are the entries necessitated by the additional information annexed to the trial balance. The Roman numerals in brackets refer to the number of the related additional information to the trial balance. This is done purely for tutorial purposes – to enable readers to follow the trail from the question to the solution. Candidates should not bother doing the same in examination situations.

iii. The final balances are the balances after effecting the adjustments on the ledger balances. The following points should be noted on how the final balances are obtained.

a. A debit adjustment entry will increase a ledger debit balance (for example, the debit adjustment entry of ₦3,012 in respect of accrued salaries and wages increased the debit balance on salaries and wages account from ₦33,440 to a final debit balance of ₦36,452).

b. A debit adjustment entry will reduce a ledger credit balance (for example, the debit adjustment entry of ₦400 in respect of the commission received in advance reduced the credit balance on the commission received account from ₦2,700 to a final credit balance of ₦2,300).

c. A credit adjustment entry will reduce a debit ledger balance (for example, the credit adjustment entry of ₦1,200 in respect of cash withdrawn by the owner reduced the debit balance on the bank account from ₦2,816 to a final debit balance of ₦1,616).

d. A credit adjustment entry will increase a credit ledger balance (for example, the credit adjustment entry of ₦50 in respect of accrued bank interest increased the credit balance on the bank interest account from ₦250 to a final credit balance of ₦300).

iv. A final balance is shown under the Statement of profit or loss column or Statement of financial position column depending on where the item belongs. Thereafter, the figures in the former column are used to prepare the Statement of profit or loss while the figures in the latter column are used to prepare the statement of financial position (as shown below). Note that the figures in the Statement of profit or loss column do not balance. Neither do the figures in the statement of financial position column. The difference between the debits and credits in these columns represents the net profit (or loss) for the period as can be confirmed from the following final accounts. In this case, the difference is ₦102,500.

OCHOLI ENTERPRISES

Statement of Profit or Loss for the year ended 31st December 20X9

	N	N
Sales		522,900
Less: Cost of goods sold		
Opening Inventory	82,124	

Purchases	387,400	
Carriage inwards	872	
Cost of goods available for sale	470,396	
Closing Inventory	(99,356)	
		371,040
Gross Profit		151,860
Add: Other Incomes		
Discount received	1,500	
Bank Interest	300	
Commission received	2,300	
Decrease in provision for doubtful debt	158	
		4,258
		156,118
Less: Administrative Expenses		
Salaries and wages	36,452	
Rent and rates	8,260	
Sundry expenses	4,142	
Bad debt	3,304	
Depreciation	1,440	
		53,598
Net profit		102,520

OCHOLI ENTERPRISES

Statement of financial position as of 31st December 20X9

	N	N	N
Non-current assets	Cost	Acc. Depn.	NBV
Motor Car	7,200	3,540	3,600
Current Assets			
Inventory		99,356	
Receivables	70,880		
Less: Provision for doubtful debt	3,544		
		67,336	
Prepaid rent		1,600	
Accrued bank interest		50	
Cast at bank		1,616	
Cash in hand		334	
		170,292	
Current Liabilities			
Payables	34,308		
Accrued salaries	3,012		
Commission received in advance	400		
		(37,720)	

	132,572
	136,232
Net assets	
Financed by	
Owner's Equity	
Capital on 1st January 20X9	45,214
Add: Net profit	102,520
	147,734
Less: Drawings	11,502
	136,232

Revision Questions

Multiple Choice Questions

1. ONE of the main uses of Trial Balance is described as to?
    a. Post items from the sales daybook into the sales ledger
    b. Check postings from the purchases daybook into the purchase's ledger
    c. Correct errors of postings
    d. Facilitate the preparation of final accounts
2. Which of the following best describes a Trial Balance? It--------------
    a. shows all entries in the books of account
    b. is a summary of the accounts in the books
    c. shows the financial position of a business
    d. is a list of extracted ledger balances
3. …………… is normally shown on the credit side of the Trial Balance.
   (a)Cash account (b)Prepaid expenses (c)Discount allowed (d)Discount received
4. The following affects trial balance except for an error of………………
   (a)omission. (b)commission. (c)entry. (d)manipulation.
5. ……………. account refers to the books which contain the summary of all accounts necessary to prepare the trial balance.
   (a)Book-keeping (b)Accounting (c)Ledger (d)Cash book
6. If trade receivables of ₦300 are included in the trial balance on the credit side in error, the difference on the trial balance will be.................................
   (a) ₦300 credit (b) ₦300 debit. (c) ₦600 credit. (d) ₦600 debit.
7. Which of the following will not normally appear in the preliminary trial balance?
   (a) Purchases (b) Opening inventory (c) Closing inventory (d) Revenue
8. The book which contains the summary of all accounts necessary to produce the trial balance is ....
   (a) Book-keeping (b) Accounting (c) Ledger
9. Cash book A trial balance is proof of the accuracy of …………
   (a) postings (b) debit entries (c) credit entries (d) ledger entries.
10. Where the trial balance does not agree, the difference must be entered in the -------- account

(a) trading (b) capital (c) suspense (d) nominal

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
D	D	D	D	C	D	C	C	A	C

Theory Questions

1. Thomas Dunny Ltd started its business in September 2019. Record the following transactions in his books of account in double-entry form and extract Trial Balance.

September 1: Started business with personal savings of ₦200,000 cash and ₦50,000 loan from Mr Earney who issued a cheque.
September 2: Paid ₦180,000 cash from the company cash box to the Bank.
September 5: Bought office fittings on credit from Binney & sons for ₦8,000
September 8: Bought a motor van for ₦5,600 paying by cheque
September 12: Bought office equipment for ₦15,000 on credit from Beta Nig. Coy.
September 15: Withdrew ₦75,000 from the bank and put in the company's cash till
September 17: Paid Binney & sons ₦7,500 by cheque while the balance was paid by cash
September 19: Repaid ₦27,000 cash as part of Loan taken from Mr Earney

The following balances appeared in the books of Thomas Dunny Ltd on 01-01-2019

	N
Capital	14,850
Bank Loan	4,000
Premises	12,000
Machinery	6,500

Transactions on 1st month of 2019 were as follows:

Additional machinery worth ₦1250 was purchased on credit from M. Messi
6th: Sales of ₦375 by cheque made
8th: Part of Bank loan ₦500 was made by cheque
11th: A cheque of ₦3500 was received from part of the premises sold
14th: Salaries and wages paid by cheque ₦425
16th: Sales on credit ₦150 to Dr. Hashim Isa
22nd: Paid M. Messi the amount owed him by cheque
27th: Insurance premium of ₦50 by cheque

Required:
Open all the necessary T accounts, record the initial balances first, post the transactions into the accounts and extract the Trial Balance.

2. The following balances were extracted from Books of CIPM on 31st December 2019:

	₦
Freehold	500,000

Capital	814,450	
Trade receivables	287,500	
Trade payables	261,500	
Furniture and fittings	162,500	
Rent	9,500	
Electricity	6,750	
Provision for bad debts – 1/1/2014	2,880	
Office Equipment (cost ₦200,000)	155,500	
Inventory 1/1/2014	77,500	
General expenses	23,500	
Rates	6,250	
Cash in hand	1,370	
Bank overdraft	44,750	
Bank charges	3,730	
Purchases	607,500	
Sales	740,000	
Carriage inwards	3,950	
Salaries	17,000	
Discount allowed	4,850	
Discount received		3,320

You are required to prepare a Trial Balance as of 31st December 2019

CHAPTER THIRTEEN

ERRORS AND CORRECTION OF ERRORS

13.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Various types of errors with meaning
ii. Classifications of errors
iii. Errors affecting Trial Balance
iv. Errors not affecting Trial Balance
v. Procedures for correcting those errors
vi. Uses of suspense account

13.2 Introduction

Errors are mistakes made in accounting records. The mistakes may be made when recording the daybook (journal), posting into the ledger and when extracting balances. It should be noted that the mere fact that an account prepared balance up is not automatic evidence that errors have not been committed because not all errors will affect or stop an account from balancing.

Also, note that the main purpose of the trial balance is to show the arithmetical accuracy of the entries in the ledgers. The two sides must be equal. If the debit side is not equal to the credit side, then there is an indication of error even some of them may not affect the trial balance.

13.3 Classification of Errors

Errors are classified into two namely:

i. Errors not affecting the trial balance
ii. Errors affecting the trial balance.

13.4 Errors Not Affecting the Trial Balance

These categories of errors do prevent the trial balance from balancing i.e., in spite of the existence of these errors, the trial balance totals will agree. These include the following:

13.4.1 Error of Omission

This error occurs when a transaction is completely omitted from the books of accounts; it is also an error whereby a transaction is not recorded in the books of account. i.e., From the debit and credit sides, both sides of the transactions are omitted. E.g., the Purchase of goods ₦10,000 from Mariam has been completely omitted from the books of account.

13.4.2 Error of Commission

This error occurs when a wrong amount is entered in a wrong person's account within the same class of accounts. E.g., Emeka paid ₦100, 000 for the goods he purchased on credit but was erroneously registered into Emeke's account who is a customer.

13.4.3 Error of Original Entry

This error involves picking of wrong figure from the source document and debiting and crediting such figure. E.g., instead of picking ₦7, 800, it was mistakenly written as ₦8, 700 and still goes through normal double-entry of debiting and crediting. It is also known as errors of transaction.

13.4.4 Error of Principle

This is an error whereby a transaction is entered in the wrong class of account, i.e., incorrect title in being given to a transaction or account. E.g., An expense for the repairs of a motor vehicle (expense) was recorded in the motor vehicle (assets) account.

13.4.5 Error of Complete Reversal of Entry

This error occurs when the double-entry for a transaction is reversed; resulting in a situation whereby the account that ought to be debited is credited and the account that ought to be credited is debited.

13.4.6 Error of Transposition

This is a mistake which involves the changing of the places of numerals making up of an amount. For example, ₦2,202 may be wrongly posted as ₦2,022; ₦4,466 may be wrongly posted as ₦4,664 and so on.

13.4.7 Error of Duplication

This error occurs when the same transaction is recorded more than once in the books of account. E.g., Payment of cash ₦6,000 to Musa had been entered twice in the two accounts.

13.4.8 Compensating Error

This is an error that is cancelled out by another set of errors made in the same books of account. If the debit item is decreased by a figure and one or more items is/are increased by the same amount on the credit side, the error will become compensating. On the other hand, if a credit item is increased, there must be a corresponding decreased of the debit item to make the error compensating.

13.5 Procedures to Be Followed When Correcting Errors

In order to correct errors, the following procedures must be followed:

a. Memorise these:

Assets account	Dr. Balance
Income account	Cr. Balance
Expenses account	Dr. Balance
Sales account	Cr. Balance
Purchases account	Dr. Balance
Liabilities account	Cr. Balance

b. Identify the type of error(s) involved.
c. Identify the two accounts involved.
d. Interpretation of errors in the ledger.
e. Finally, prepare journal.

Illustration 1:

Show the ledgers and journal entries necessary to correct the following errors;

a. Sales of Motor van ₦800,000 had been entered in the sales account.
b. Purchase of goods from Blessing ₦6,500 was completely omitted from the account.

c. Goods of ₦7,000 returned by Mallam Zambo have been entered into Mallam Zango's account.
d. Sales were overcast by ₦3,400 as well, were motor expenses.
e. Cash paid to James ₦4,000 was entered on the credit side of his account and debited to the cash account.
f. Purchase of goods from Olaiya ₦5,900 has been entered into the account as ₦9,500
g. Payment of cash ₦3,200 to Nneka has been entered twice in the two accounts.

The questions above will be used for our illustration and the procedures will be followed.

a. Errors of principle

i. Motor van and sales accounts

ii. Demonstration in the ledgers

Motor van account

		No entry	

Sales account

		Bank	₦800,000

Corrections of errors

Dr. : Sales account

Cr. : Motor van account

Sales account

Motor van	₦800,000		

Motor van account

	Sales ₦800,000

b. **Errors of Omission**

i. Purchases and Blessing accounts

ii. Demonstration in the ledgers

Purchase account

No entry	

Blessing account

	No entry

Corrections of errors

Dr. : Purchase account

Cr. : Blessing account

Purchase account

Blessing ₦6,500	

Blessing account

	Purchase ₦6,500

c. **Errors of Commission**

i. Mallam Zambo and Mallam Zango accounts

ii. Demonstration in the ledgers

Mallam Zambo account

	No entry

Mallam Zango account

	Returns inwards N,7000

Corrections of errors

Dr. : Mallam Zango account

Cr. : Mallam Zambo account

Mallam Zango account

₦7,000	

Mallam Zambo account

	₦7,000

d. Compensating Errors

i. Sales accounts and Motor expenses accounts

ii. Demonstration in the ledgers

Sales account

	Overcast ₦3,400

Motor expenses account

Overcast by ₦3,400	

Corrections of errors

Dr. : Sales account

Cr. : Motor expenses account

Sales account

₦3,400	

Motor expenses account

	₦3,400

e. Errors of Complete Reversal Entry

i. Cash accounts and James accounts

ii. Demonstration in the ledgers

Cash account

James (error)	₦4,000		

James's account

		Cash (error)	₦4,000

Corrections of errors

Dr. : James's account – (₦4,000 x 2) ₦8,000

Cr. : Cash account – (₦4,000 x 2) ₦8,000

James's account

₦8,000	

Cash account

	₦8,000

f. Errors of Original Entry

i. Purchase and Olaiya accounts

ii. Demonstration in the ledgers

Purchase account

Olaiya (error)	₦9,500		

Olaiya account

		Purchase (error)	₦9,500

Corrections of errors

Dr. : Olaiya account – (₦9,500 – ₦5,900) =₦3,600

Cr. : Purchase account – (₦9,500 – ₦5,900) =₦3,600

Olaiya account

₦3,600	

Purchase account

	₦3,600

g. Errors of Duplication

i. Abiodun and Cash accounts

ii. Demonstration in the ledgers

Abiodun account

Cash	₦3,200		
Cash (error)	₦3,200		

Cash account

		Abiodun	₦3,200
		Abiodun (error)	₦3,200

Corrections of errors

Dr. : Abiodun account ₦3,200

Cr. : Cash account ₦3,200

Abiodun account

		Cash	₦3,200

Cash account

Abiodun	₦3,200		

a. Sales of Motor van ₦800,000 had been entered in the sales account.
b. Purchase of goods from Blessing ₦6,500 was completely omitted from the account.
c. Goods of ₦7,000 returned by Mallam Zambo have been entered into Mallam Zango's account.
d. Sales were overcast by ₦3,400 as well as motor expenses.
e. Cash paid to James ₦4,000 was entered on the credit side of his account and debited to cash account.
f. Purchase of goods from Olaiya ₦5,900 has been entered into the account as ₦9,500
g. Payment of cash ₦3,200 to Nneka has been entered twice in the two accounts.

Journal	Dr	Cr
	₦	₦
Sales account Motor van account Sales of motor van entered in sales account now corrected	800,000	800,000
Purchases account Blessing account Purchase of goods from Blessing now corrected	6,500	6,500
Mallam Zango Mallam Zambo account Goods returned by Mallam Zambo mistakenly entered in Mallam Zango now corrected	7,000	7,000
Sales account Motor Expenses account Correction of overcast of sales and motor expenses	3,400	3,400

James's account Cash account Payment of cash to James mistakenly reversed now corrected	4,000	 4,000
Olaiya account Purchase account Correction of error of wrong amount	3,600	 3,600
Nneka account Cash account Double recording of the same transaction now corrected	3,200	 3,200

Illustration 2

The following errors were discovered by you after casting the trial balance and still agree.

Correct the necessary errors in the journal entries.

a. The purchase of a motor van ₦150,000 is debited to the purchase account.
b. The sales of ₦865,000 from Chukwu were entered in the books as ₦856,000.
c. A sale of goods ₦16,000 to Musa has been completely omitted from the books.
d. A purchase of goods, ₦145,000 from B. John was entered in error in B. Johnson's account.
e. The account is overcast by ₦2,500 as well as the rent account by ₦500 and the salaries by ₦2,000.
f. A receipt of a cheque of ₦150,000 from A. Ajayi was entered on the payment side of the cash book in error and debited to A. Ajayi Account.

Journal	Dr	Cr
	₦	₦
i. Error of Principle Motor van account Purchase account Being purchase of fixed asset debited in error to purchase account now corrected	 150,000	 150,000
ii. Error of Original Entry Purchases account Chukwu account Being the mistake of entering in the books now corrected	9,000	 9,000
iii. Error of Omission Musa Sales account	16,000	 16,000

Being correction of omission of sales invoice from sales journal now corrected		
iv. Error of Commission B. Johnson account B. John account Being Purchase entered in wrong personal account now corrected.	145,000	145,000
v. Compensating Error Sales account Salaries account Rent account Being correction of overcast of ₦2,500 each in the sales account and the combination of rent and salaries account which compensated for each other.	2,500	2,000 500
vi. Error of Complete Reversal Entry Bank account Ajayi account Being A. Ajayi and credited to the bank in error now corrected.	150,000	150,000

13.6 Errors Affecting the Trial Balance

These are errors which affect the trial balance i.e., they would cause the trial balance totals not to agree. They include the following: -

13.6.1 Casting Error

This error occurs when adding up entries in the accounts resulting in under casting or overcasting.

13.6.2 Partial Reversal of Entry

This is an error whereby the double entry for a transaction is posted to the same side of the respective accounts. For example, salaries paid may debited to the salaries account but wrongly debited to the cash book.

13.6.3 Error of Transposition

Where an error or transposition affects only one side of the account, it will affect the trial balance. For example, a cheque of ₦6,661 received from a debtor may be correctly debited to the bank account but wrongly credited to the debtor's account as ₦6,616

13.6.4 Over/Under- Statement of opening or closing balances.

13.6.5 Posting the debit or credit entry for a transaction without posting the corresponding opposite entry.

13.6.5 Omission or misstatement of the balance on an account when extracting the trial balance.

When there is no agreement between the debit and credit, then a temporary account called a suspense account. When correcting errors and only one ledger is being debited or credited, a second ledger account need be created to complete the double-entry. This ledger is called suspense account. This is a temporary account created to record the difference that originates in the books as a result of errors which throw the trial balance totals out of balance have to be created through suspense account.

Illustration 3

The trial balance of UGWU Enterprise shown a difference of ₦50,000 and this has been carried to the credit side of a suspense account. Further investigation revealed the following errors and omissions:

a. Returns inwards books was overstated by ₦10,000
b. Purchase daybook was under cast by ₦30,000
c. The closing balance of the cash book had a debit of ₦200,000 instead of ₦210,000
d. Credit sales of ₦25,000 to Ade was credited to his personal account.
e. An amount of ₦50,000 received from Dauda has not been posted to his account
f. Discounts received and allowed of ₦25, 000 and ₦10, 000 had not been posted to the cash book.
g. Goods worth ₦600 returned to suppliers were entered in his personal account as ₦105,000

You are required to:

i. Journalise the errors
ii. Write up the suspense account.

Journal

	Dr	Cr
	₦	₦
a. Suspense account Returns inwards account Being correction of overcast of returns inwards now corrected	10,000	 10,000
b. Purchases account Suspense account Being the undercast of purchase of ₦30,000 now corrected	30,000	 30,000
c. Suspense account Cash book Being correction of mis-posting of figures now corrected	10,000	 10,000
d. Ade account Suspense account Being correction of reversal of entry in Ade account now corrected.	50,000	 50,000
e. Suspense account Dauda account Being correction of omission of ₦50,000 from Dauda account.	50,000	 50,000
f(i). Suspense account Discounts received account Being correction of omission of discount received from cash book.	25,000	 25,000
f(ii). Discounts Allowed account Suspense account Being correction of omission of discount allowed from cash book.	10,000	 10,000
g. Supplier account Suspense account Being correction of mis - posting of figures to account.	45,000	 45,000

Suspense account

Returns inwards	10,000	Balance b/d	50,000
Cash book	10,000	Purchases	30,000
Dauda	50,000	Ade	50,000
Discount received	25,000	Discount Allowed	10,000
Supplier	45,000		---------
	140,000		140,000

Revision Questions

Multiple Choice Questions

1. In recording a transaction in the books, a posting was made in a wrong class of accounts, such can be described as an error of ……………………
   a. principle.
   b. compensating.
   c. commission.
   d. original
2. The following accounting errors do not affect the trial balance except, -----------
   (a)balancing (b)principle (c)commission (d)compensation
3. The debts that had become clear that the receivables cannot pay whole is known as….
   a. Doubtful
   b. bad
   c. irrecoverable
   d. allowance
4. Error committed in recording into wrong personal account as a result of similarities in identity is called error of -----------------
   a. Omission
   b. Principles
   c. Commission
   d. Compensating
5. Mistakes made when keeping accounting records is known as-------
   a. fraud
   b. errors
   c. principles
   d. reversal
6. A suspense account is used for the correction of errors that……
   a. can only be detected by the auditor.
   b. overstate or understate profit or loss.
   c. affect the agreement of the trial balance.

d. affect the agreement of net assets to current assets.

7. Which of the following errors would affect a trial balance?
   a. Error of casting.
   b. Error of omission.
   c. Error of commission.
   d. Error of original entry.
8. What is the effect of over-cast opening inventory on the profit of a business?
   a. Overstatement of profit
   b. Nil effect on the profit
   c. Understatement of profit
   d. Reduction of profit to a nil balance
9. Where the payment made to a trade payable was not recorded in the books of a company. This is an error of ………………

   (a)principle (b)commission (c)Transposition (d)omission
10. The following affect trial balance except an error of………………………..
    a. omission.
    b. commission.
    c. entry.
    d. manipulation.

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
A	D	A	C	B	C	A	C	D	D

Theory Questions

1. The trial balance of Nkiru & Sons failed to agree and the difference of ₦1185 credit was kept in suspense Account. The following errors were later discovered as follows:
   a. A cash payment of ₦1325 was entered in the cash book as a receipt
   b. Sales and purchases account were overcast by ₦1752 and ₦1306, respectively.
   c. A sales return of ₦370 was omitted in the books.
   d. Bank charges of ₦187 was recorded in the cash book only
   e. The opening balance of debtors account was brought down as ₦1175 instead of

₦11598

f. Proceed of an old motor vehicle amounting to ₦1351 was posted to sales account.

You are required to:

i. State the name of each of these errors.

ii. Prepare journal entries to effect the necessary corrections.

iii. Prepare the suspense account.

2. The trial Ugwu Enterprises failed to agree. It was discovered that the Credit side exceeded the Debit side by ₦1584, and a suspense account was opened. The following errors were later discovered as the causes of the discrepancies:

i. Motor Van expenses amounting to ₦1600 was debited to Motor Van.

ii. The total of discount allowed amounting to ₦560 was posted to the credit of discount received account.

iii. A sale of goods ₦640 to Funmi's brothers was correctly entered into the Sales book but not posted to the customer account in the ledger.

iv. Return outwards account was undercast by ₦60.

v. Goods worth ₦120 was returned by S.O Charity although the entry was correctly made in the return inwards books but was not posted to the customer's account in the ledger.

vi. A credit sale of goods for ₦760 was recorded correctly in the sales book but entered as ₦616 in the customer's account.

vii. The purchases daybook was overcast by ₦140.

You are required to correct the above errors and show the suspense account duly balanced.

CHAPTER FOURTEEN

BANK RECONCILIATION

14.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The meaning of bank reconciliation statement;
ii. Why bank statement does not agree with cash book balance; and
iii. How to reconcile bank statement with cash book balance.

14.2 Bank Reconciliation Statement

This is a statement prepared in order to reconcile the cash book balance (bank column) with the balance shown in the bank statement received from the bank. The bank reconciliation will explain the difference in the two balances.

The two balances may not agree at a particular date as a result of the following:

a. **Clerical errors:** items may be incorrectly recorded by the bookkeeper e.g., errors of transposition- a cheque of ₦25, 000 entered as ₦20,500.
b. Entries appearing in the bank statement but not in the cash book e.g.:
    i. Charges by the bank for rendering services to the customer these are, bank charges, commission on turnover (COT), interest on overdraft and value added tax (VAT) etc.
    ii. Payment made by the bank on behalf of the customer, e.g., standing order, direct debits etc.
    iii. Amount received directly by the bank on behalf of customers, e.g., credit transfers, direct credit, dividend etc.
    iv. Returned cheques or dishonoured cheques.
c. **Unpresented Cheques** – cheques drawn by the business and paid to the suppliers (payables) which the suppliers have not yet presented for collection in the bank and as such were not reflected in the bank statement.

d. **Uncredited Cheques or Lodgements** – Cheques or cash collected from the business customers and paid into the bank but which the bank has not yet credited to the business account.

e. **Bank Errors** – a situation where the bank by act of omission or commission wrongly credit or debit the business account. This is rare occurrence except in examination questions.

f. **Cashier Error** – where deposit is posted to the wrong account.

14.3 Steps Involved in Carrying Out Bank Reconciliation

The underlisted steps should be followed in carrying out bank reconciliation:

1. Carry out a detailed examination and comparison of the cash book (bank column) and the bank statement to identify each individual cause of difference.
2. Where the differences are due to either reasons (A) or (B) as explained above, update the cash book with the items omitted from it but shown correctly in the bank statement. The balances arrived at after this updating is called "Balance as per adjusted Cash Book." The cash book should by now show the correct figure so far as the firm's account is concerned.
3. Any remaining causes of differences (i.e., unpresented cheques, uncredited cheques, bank errors and wrong deposit etc..) are explained in the bank reconciliation. (See format below).

14.4 Format of Bank Reconciliation Statement

1. Where there is a favourable balance in the bank statement

	₦	₦
Balance as per bank statement		xxx
Add: Uncredited cheque	xx	
Bank error	xx	xxx
Less: Unpresented cheque	xx	
Wrong deposit	xx	(xxx)
Balance as per adjusted cash book		xxx

2. Where there is an overdraft in the bank statement

	₦	₦
Balance as per bank statement (overdraft)		xxx
Add: Unpresented cheque	xxx	
Wrong deposit	xxx	xxx

Less: Uncredited cheque	xxx	
Bank error	xxx	(xxx)
Balance as per adjusted cash book		xxx

Illustration 1

The following are the extract from the Bank column of a cash book of Nkiru Limited which is into the production of soft drink and a Bank statement receipt from the Bank 31/1/2015.

Cash Book

		N			N
Jan.	Balance b/d	50,000	Jan	6 Item Ayo Ltd	56,000
10	Softax Ltd	75,000	,,	11 B. Anyanwu	124,000
18	A. Emmam	65,000	,,	15 B . Hann	48,000
24	Cash	102,000		31 Bal c/d	182,000
30	Ades	118,000			
		410,000			410,000

Bank statement

			BALANCE	DR	CR
			N	N	N
Jan.	1	Balb/d			50,000cr
	10	Cheque		75,000	125,000cr
	18	Cheque	65,000	190,000cr	
	19	Ayo Ltd	56,000		134,000cr
	24	Cash	102,000	236,000cr	
	28	Credit transfer (M. Ojo)	132,000	368,000cr	
	30	Bank Charges	34,000		334,000cr

Required:

i. Prepare the Adjusted Cash book and,
ii. Bank statement for the month of January 2015

Solution 1

Adjusted Cash book for the month of January 2015

	N		N
Jan. 1 Bal b/d	182,000	Bank Charges	34,000
Jan 28 M. Ojo	132,000	Bal c/d	280,000
	314,000		314,000

Bank Reconciliation Statement

		N	N
Balance as per Adjusted Cash book			280,000
Add; Unpresented Cheques:	B Anyanwu	124,000	
	B. Hann	48,000	172,000
			452,000
Less; Uncredited Cheques: Ade			(118,000)
			334,000

Bank Overdrafts

The adjustment needed to be reconciling the Bank overdraft (shown by a credit balance in the cash book) according to the firm's books with that shown in the bank's book are the complete opposite of that needed when the account is not drawn.

Illustration 2

A cash book and a bank statement showing an overdraft. Only the cheque for G. Omokafe (A) ₦1060 and the cheque paid to J. Olu (B) ₦630 need adjusting as shown below:

Cash Book

2011	N	2011	N
Dec 5 B Amos	3,080	Dec 1 Bal b/d	7,090
,, 24 F Mayor	1,200	,, 9 G. David	1,400
,, 29 I. Daniel	1,240	,, 27 R. Kelly (B)	630
,, 31 T. Masho (A)	1,060	,, 29 United Trust	770
,, 31 Bal c/d	3,800	,, 31 Bank charges	490
	10,380		10,380

Bank Statement

2011	DR	CR	BALANCE

	N	N	N
Dec. 1 Balance			7,090 O/D
,, 5 Cheque		3,080	4,010 O/D
,, 14 P. Oluda	1,400		5,410 O/D
,, 24 Cheque		1,200	4,210 O/D
,, 29 Daniel : credit transfer		1,240	2,970 O/D
,, 29 United Trust: Standing order	770		3,740 O/D
,, 31 Bank Charges	490		4,230 O/D

Solution

Bank Reconciliation Statement as of 31 December 2011

	N	
Overdraft as per cash book	3,800	
Add Bank lodgements not on Bank Statement		1,060
	4,860	
Less: Unpresented cheque	(630)	
Overdraft per Bank statement	4,230	

Revision Questions

Multiple Choice Questions

1. Cheques deposited in the customer's bank account, and which are not yet recorded in the bank statement until three days are called-------------cheques
   a. Dishonoured
   b. uncredited
   c. unpresented
   d. lodgement
2. Dan Enterprises owed Alan Ventures the sum of ₦5million, and the company gave an instruction to the Bank to pay the sum owed on its behalf. This transaction is referred to as -----------
   a. obey the order
   b. standing instruction
   c. allow the payment
   d. instruction and order
3. A Bank reconciliation statement compare a bank statement with------
   a. Cash Payments journal
   b. Cash receipt journal
   c. Financial Statements
   d. Cash Book
4. What is Deposit in transit in Bank reconciliation
   a. Added to the Bank balance
   b. Subtracted from the Bank balance
   c. Subtracted from the Cash book balance
   d. Added to the Cash book balance
5. What type of cheque is issued by a firm but not yet shown to the bank?
   a. Uncredited Cheques
   b. Unpresented Cheques
   c. Uncollected cheques
   d. Bounced Cheques

6. 'NSF' marked in cheque sent back by the Bank indicates?
    a. Cheque has been forged
    b. A bank could not verify the identity
    c. Not sufficient funds
    d. A cheque cannot be cashed because it is illegal
7. The parties to a cheque are …………………………..
    a. drawer, payer and payee.
    b. drawee, payer and payee.
    c. drawer, drawee and payee.
    d. acceptor, drawer and drawee.
8. ………………………….is the main source document for recording cash paid into bank.
    a. Cash book
    b. Bank book
    c. Deposit slip
    d. Bank statement
9. ……………………….. is the alternative name for current account in the banking industry?
    a. Call deposit
    b. Time deposit
    c. Fixed deposit
    d. Demand deposit
10. In reconciliation of the Bank statement with an entity's Bank balance, which of these items will not require an entry in the adjusted cash book?
    a. Direct debit to the entity's bank account
    b. Bank charges
    c. Incorrect credit into bank account
    d. Cheque paid in by the entity and dishonoured.

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
B	B	D	A	B	C	C	C	D	C

Theory Questions

1. The Bank statement for the month of March 2020 and the Bank column of the cash book for the same period for business of Harry & Sons Enterprises are as follows:

Date	Details	Debit	Credit	Balance
		N	N	N
1/3/20	Bal b/f	-		156,000cr
4/3/20	standing order Electricity	12,400		143,600cr
7/3/20	Cheque No 201	17,830		125,770cr
11/3/20	Interest on investment	13,460	139,230cr	
13/3/20	Receipt from customers		25,840	165,070cr
17/3/20	Cheque No 203	14,856		150,214cr
20/3/20	Cheque No 205	18,000		132,214cr
23/3/20	Direct Debit	7,500		124,714cr
27/3/20	Cheque No 206	15,980		108,734cr
31/3/20	Bank Charges	1,059		107,675cr

Cash Book

		N				N
1/3/20	Bal b/f	106,500	4/3/20	Yan Enterprises	201	17,830
9/3/20	Cheque from Affiong	28,540	7/3/20	Students Cipm	202	14,100
19/3/20	Cheque from Yerima	27,031	9/3/20	Niger & Co	203	14,856
26/3/20	Cheque from Chukwu	14,068	12/3/20	Mama Put & Sons	204	23,500
			16/3/20	Raphael & Co	205	18,000
			19/3/20	Lanta & Sons	206	19,580
			28/3/20	Salaries	207	27,800
			31/3/20	Bal c/d		98,973
		234,639				234,639
1/4/20	Bal b/d	98,973				

The following additional information are given:

i. The opening balance figure is correctly stated in the Bank statement
ii. The correct figure for cheque number 206 is ₦15980 while the correct value of cheque from Affiong is ₦25840.
iii. The direct debit in the Bank statement was the monthly subscription made on behalf of Harry & Sons Enterprises another customer of the Bank.

You are required to:

a. State the items that are required to update a cash book to make it become adjusted cash book.
b. Prepare the adjusted cash book for the business of Harry & Sons Enterprises.
c. Prepare a Bank statement as of 31st March 2020 for Harry & Sons Enterprises.

2. The following information was obtained from the books of Lovina Amadi & Sons relating to its Bank statement of September 2012, the Bank statement was received on 5th October 2022.
   i. The closing balance as per cash book was overdraft of ₦10200 while the Bank statement showed a credit balance of ₦11930.
   ii. A cash payment of ₦10120 was recorded in the cash book under the Bank column.
   iii. A credit transfer of ₦23440 in settlement of a debt by a customer had not been entered in the cash book.
   iv. A dividend of ₦10580 was paid directly to the Bank.
   v. A cheque for rates of ₦10670 for the month was entered in the cash book as ₦10,760.
   vi. Standing order on insurance for ₦10200 was paid by the Bank.
   vii. The Bank charges for the month was ₦10140
   viii. A cheque of ₦11280 received and entered into the cash book was not credited by the Bank until 7th October 2022
   ix. Cheque of ₦6880 lodged by Lovina Amadi & Sons was credited to Lovina Amadi Enterprises account.
   x. Cheque drawn by the business to ₦9870 were not paid by the Bank until 6th October 2012
   xi. A dishonoured cheque of ₦7230 was not recorded in the cash book.

You are required to:

a. Prepare an adjusted cash book
b. Bank Reconciliation statement as of September 2022.

CHAPTER FIFTEEN

PROVISIONS FOR BAD AND DOUBTFUL DEBTS, ACCRUALS, PREPAYMENTS AND DISCOUNTS

15.1 Learning Objectives

At the end of this chapter, the readers are expected to know and understand the;

i. Various type of provision made in account and their treatment;
ii. Reasons for making provisions;
iii. Characteristics of provisions;
iv. Treatment of accruals and prepayments; and
v. Different types of discounts.

15.2 Introduction

The term provision can be defined as the amount set aside in anticipation of future loss of income or assts. It can also be defined as the amount set aside for the compensation for loss in the value of asset used up or amount set aside in connection with future obligations.

15.3 Reasons for Making Provisions

i. To ensure that the profit loss over a defined period is neither overstated nor understated.
ii. To ensure that future financial obligations of the enterprise are anticipated before it is due and are adequately met when due.
iii. To ensure that adequate charges are made for the fixed asset used in earning profit in a particular period of time.
iv. To comply with the various accounting principles; for example, accruals, matching, prudency and fairness.
v. In some specialised organisation such as insurance and banking businesses, some provisions are made in compliance with the laws that set up and guide the operation of such businesses.
vi. The association to which the organisation belong may also dictate the types of provisions to make thus provision may be made to keep with such directives.

vii. The types of business organisation which a particular entity belong (limited liability company, partnership or sole proprietorship) will also affect the type of provision which will be made: for example, the companies and Allied Matter Act 2004 specifically requires limited liabilities companies to make certain provisions. The sole proprietorship and partnership business do not make such provisions.

15.3.1 Characteristics of Provisions

The following are some of the characteristics of provision: -

i. Provisions normally have credit balances unless when provision is made against the principles of prudency (example of provision made against the principle of prudency is provision for discount received).
ii. The balance of provision at the end of the financial year normally appears in statement of financial position (balances sheet) as a deduction from the item on which the provision in made.
iii. Provision for a specific period is regarded as an expense or as an income to be deducted from or added to the income statement before arriving at the net profit for the year.
iv. The amount of provision in the income statement is normally the increase or decrease of that provision (that is the difference between the opening and closing balance of provision) will normally be transferred to the income statement as an expense or as an income.
v. Provisions made are merely estimates, which may be below or above the actual figure being provided for.
vi. Charges for provisions don not involve movements of cash. This means that provision charges are non out of pocket expenses.
vii. When any provision made is no longer needed, it will be cancelled out by transferring it into the income statement.

15.3.2 Types of Provisions

Provisions made in financial accounting can be grouped into three categories:

Provisions made to ensure that a conservative profit is obtained. These are:-

a. Provision for doubtful debts

b. Provision for bad debts
c. Provision for discount allowed
d. Provision for unrealised profits

Provisions made so as to ensure that future financial obligations are anticipated and met are:

a. Provision for taxation
b. Provision for settlement of any future liability.

Provision to compensate for that part of income statement (fixed asset) used in a particular period to generate income is provision for depreciation.

All the provisions falling under the three categories above are made in line with the principles of prudency. A fourth category of provision however exist which is made against the principles of prudency that is the provision that anticipates income. This provision is known as provision for discount received.

15.4 Provisions for Discount Received

This type of provision goes against accounting principle of prudency. This type of provision is not recognised both in theory and practice of accounting. It is possible for an enterprise to be aware of the fact that it will be entitled to discounts from some of its suppliers in future. It is however risky to recognise such discounts before they are actually received because conditions might change and can make such anticipated discounts to be forfeited. It is therefore not wise to anticipate such income until it is actually earned. As a result of this, provision for income to be earned is not normally made in accounting. Each of the three categories of provisions are briefly discussed as below: -

15.5 Provisions made to ensure conservative profit

As earlier stated, these provisions are made up of provision for bad debts. Provisions for doubtful debts (or often combined and known as provisions for bad and doubtful debts), provision for discount allowed and provisions for unrealised profits.

15.5.1 Provision for bad debt

This is provision made by the organisation in anticipation of bad debts which may arise in future. As of the end of the financial period, there may be outstanding debtors. The enterprise may anticipate that part of the outstanding balance of debts will not be received when due after a particular financial period. It may however not be possible to determine at that point the exact amount of the expected loss from the expected bad debt. In order not to push this loss to a financial period different from which it occurred; a provision would be made to cover the expected bad debt. This type of provision is known as provision for bad debts.

15.5.2 Provision for doubtful debt

This is provision made against debts due to be collected by an organisation in future which are considered as uncertain as to whether or not such debts will be collected when due. The uncertainty may be as a result of past failure of such customer(s) or occurrence of certain events which raise doubts as to the certainty of collecting the outstanding debts.

15.5.3 Provision for bad and doubtful debt

Provision for bad debt is made against debts which is certain of becoming in future while provision for doubtful debts is made against a debt which may or may not actually become bad. As a result of the similarities in name and meaning of the two terms, they are sometimes combined and known as provision for bad and doubtful debts. If a provision for doubtful debt is to be created in addition to a provision for bad debt already created such provision for doubtful debt will be based on the balance of trade receivables less provision for bad debt. This is because it is the balance of the remaining receivables that are doubtful since a debt already bad can no longer be doubtful.

15.5.4 Provision for discount allowed

This refers to provision made by an organisation in expectation of discounts that will be given to customers in future. Like the provisions for bad debts and doubtful debts, such provision is in connection with the discount that will be given to outstanding customers at the point where the provision is being made. The expected discounts are discounts that will be given during the financial period coming after the provision is made.

15.4.5 Provision for unrealised profit

This refers to provision made to ensure that a profit already recognised on an existing asset not yet sold or changed into cash is excluded from the income statement and recognised in future period when such asset is sold or changed into cash.

15.5.5 Provisions against future liabilities

These are provisions made against expected future financial obligations. The organisation may have certain liabilities to settle in future and to ensure that the burden is not sudden in the financial period when payment will be made, a gradual amount may be set aside from period to period and added together till the time when that obligation will be due.

15.5.6 Provision for usage of non-current tangible assets

It refers to amount set aside for the usage of non-current assets to earn profit in the organisation. This amount is set aside in each financial period and the additions over defined financial period are referred to as provision for depreciation. (See next chapter).

15.5.7 Provisions for bad debts, doubtful debts and discount allowed

As a result of the accrual concepts, sales income for the period is the addition of cash sales plus credit sales. These total sales represent income earned from sales in that period. This is the sales shown in the trading account. The gross profit and net profit for the period are computed with reference to the sales disclosed in trading account.

At the end of the financial period, some of the customers who purchased on credit would still have their account outstanding as trade receivables. The outstanding debts will be collected in future financial period. By then part or all of these debts will remain uncollected, or amount collected will be lower than expected debts (because of discount allowed), as a result, a loss will occur at the point of such collection. This loss however relates to previous financial period, and it will be a misrepresentation if such loss should be charged against that period when it occurred.

To guide against charging such loss against the period which it does not relates to, provision for bad debts, doubtful debts and discounts allowed are made as appropriate in the period in which they relate rather than the period when the bad debt, doubtful debts and discount allowed are actually experienced by the entity.

15.6 Accounting Policies

When the decision to make provisions against bad debts, doubtful debts and or discounts is made, there are certain policies the organisation has to establish. These include:

(a) The number of provisions which are to be made for each period.
(b) The method of keeping books for the provisions.

The amount of provision to make in relation to these items is determined by the accountants assisted by the credit control department. They will be guided by their specific knowledge of the customers especially the past knowledge in relation to the pattern of payment of the customers.

To enable us to know the true ways the customers make payment, customers are generally classified as specific and general debtors.

i. The specific receivables are those that can be separately and individually identified, and their knowledge of credit worthiness is known. The sensible option when making provision for bad and doubtful debt for any specific receivables is to make a full provision to cover any portion of such debt that is doubtful. Hence one hundred percent (100%) provisions are made against specific doubtful debts.
ii. The general receivables are the remaining receivables after the specific receivables have been taken away from the total receivables. They are generally those receivables whose pattern of payment is not well known to the organisation. A policy must be established as to the extent of provision to be made to cover bad and doubtful debts and discounts, which may arise from the general receivables. In most cases, a percentage is normally established based on the past experience of the organisation. This percentage can be increased or decreased as the situation dictates in future. The other alternative to the use of percentage is to use an absolute figure which is arrived at using the prevailing situation at the time the provision is made. The additions of specifics of specific provision and general provision will give the total provision for a particular period.

Illustration 1

On 31st March 20x3, the amount owing by the customers of Pako Enterprises Ltd. was ₦75000. Five customers of the company A.B.C.D and E were owing ₦130, ₦100, ₦405, ₦1300 and ₦960 respectively included in the ₦7500. The amount due from B.C. and E were suspected to be doubtful while the debts of A and D are sure of full collection. The firm policy is to make a 3% provision on general debtors as doubtful debts.

You are required to:

a. State separately the amount of specific and general receivables as of 31/3/20x3
b. State separately the specific and general provision as of 31/3/20x3
c. State total provision for doubtful debts as of 31/3/30x3.

Solution to 1

a. (i) Specific receivables as of 31/2/20x3

These are the additions of the amount owing by the customers whose names are stated in the question:

		₦
Customer	A	130
Customer	B	100
Customer	C	405
Customer	D	1300
Customer	E	<u>960</u>
Total		<u>2895</u>

(ii) General receivables are the difference between the total receivables and the specific receivables ₦7500-₦ 2895 = ₦ <u>4605</u>

b. (i) Specific provision is the provision to be made on the specific doubtful debt.

These are 100% of all specific doubtful debts which is

100% of debts of B.C and E
100% of (₦100 + ₦405 + ₦960)
100% of ₦1465 = ₦1465

(ii) General provision is 3% of the general receivables

This is 3/100 x 4605 = ₦138

c. Total provision for doubtful debts = specific + general provision

= ₦ 1465+₦138 = ₦1603

15.7 Book-Keeping

The normal procedure is to keep ledger account for each of the provisions to be maintained on a continuous basis. For example, ledger accounts are separately maintained for each of the following provision for bad debts, provision for doubtful debts, provision for discount allowed and provision for discount received (if maintained). In the alternative, the provision for bad and doubtful debts can be combined together. Another area of book-keeping in which specific decisions need to be made is how to record the actual event for which provision is made. Thus, decision must be made on how to record bad debts, bad debts recovered and discounts. The alternatives available in recording these items are to:

i. send them into profit or loss account without recording them in their respective provision account.
ii. send bad debts and bad debts recovered to provision for bad debts account and discounts to their respective provisions account.
iii. send bad debts and bad debts recovered to provisions for doubtful debt account and the discounts to their respective provisions account.
iv. Any other alternative specified.

In maintaining each of the provision accounts, the principle to adopt is to know the opening and closing provisions in the respective account. The opening provision is brought forward on the credit side of the ledger account before the total line while the closing provision is carried to the debt side of the ledger account before the total line and brought forward to the credit side of the ledger account below the total line. The balance of the provision account (whether or not any specific items are recorded in the provision account) is then transferred into the income statement, the closing balance is shown in the statement of financial position as a deduction from the item on which the provision is made.

If this principle is used whichever of the alternatives i-iv stated above is adopted the conclusions produce will be the same.

The recording of provisions may be made along with other transactions when keeping the books or provisions may only be considered as part of the adjustments to make when preparing the final accounts of the enterprise. If ledger accounts are kept, the opening and closing provisions should be established and carried forward as earlier indicated. After all other entries in the provision accounts have been made, the balancing figure will be transferred into the income statement while the closing provision (being the one made against the future occurrence of the perceived event) will be shown in the statement of financial position.

On the other hand, if provision is treated as an adjustment when preparing the final accounts of the enterprise, the opening provision will be included in the trial balance or lists of balances, and this will either be increased or decreased. The increase or decrease will be transferred to income statement while the closing balance taken to statement of financial position.

Illustration 2

Mayo, Kudi and Rita partnership business makes account to 31st March annually. The decision to establish provisions was made on 1st April 20x0 and the following policies were established.

i. To make provision for bad debts equals to 2% of receivables.
ii. Provision for doubtful debts 5% of receivables less provision for bad debts.
iii. Provision for discount allowed for the first three years were ₦270, ₦540 and ₦370, respectively.
iv. Provision for discount received 2½% of trade payables.

On 31st March of each of the following year the balances of receivables and payables ledgers were as given.

	31/3/20x1	31/3/20x2	31/3/20x3
Years ended	N	N	N
Trade receivables	11,426	1,588	10,637
Trade payables	7,639	9,421	6,800
Bad debts	410	372	205
Bad debts recovered	60	69	55
Discount allowed	203	186	410

Discount received	87	94	110

You are required to prepare for each year

a. The necessary provision accounts on the assumption that bad debts, bad debt recovered, and discounts are directly written to the income statement.
b. Show the abridge income statement and statement of financial position of each year.

Solution to 2

(a) Provision for Bad Debts Account

31/3/20x1	Balance c/d	229	13/3/20x1	Income statement	229
		-			-
		229			229
31/3/20x2	Balance c/d	316	1/4/20x1	Balance b/d	229
			31/3/20x2	Income statement	87
		316			316
31/3/20x3	Income statement	103	1/4/20x2	Balance b/d	316
31/3/20x3	Balance c/d	213			
		316			316
			1/4/20x3	Balance b/d	213

Provision for Doubtful Debt Account

31/3/20x1	Balance c/d	560	13/3/20x1	Income statement	560
		560			560
31/3/20x2	Balance c/d	774	1/4/20x1	Balance b/d	560
			31/3/20x2	Income statement	214
		774			774
31/3/20x3	Income statement	253	1/4/20x2	Balance b/d	774
31/3/20x3	Balance c/d	521			
		774			774
			1/4/20x3	Balance b/d	521

Provision for Discount Allowed Account

31/3/20x1	Balance c/d	270	13/3/20x1	Income statement	270
		270			270
			1/4/20x1	Balance b/d	270

31/3/20x2	Balance c/d	540	31/3/20x2	Income statement	270
		540			540
31/3/20x3	Income statement	170	1/4/20x2	Balance b/d	540
31/3/20x2	Balance c/d	370			
		540			540
			1/4/20x3	Balance b/d	370

Provision for Discount Received Account

31/3/20x1	Balance c/d	191	13/3/20x1	Balance c/d	191
		191			191
1/4/20x1	Balance b/d	191			
31/3/20x2	Income statement	45	31/3/20x2	Balance c/d	236
		236			236
1/4/20x2	Balance b/d	236	31/3/20x3	Income statement	66
			31/3/20x3	Balance c/d	170
		236			236
1/4/20x3	Balance b/d	170			

Abridge Profit or Loss Account for Year Ended 31/3/30x1

Bad debts	410	Bad debts recovered	60
Discount allowed	203	Discount recovered	87
Provision for bad debts	229	Provision for discount received	191
Provision for doubtful debts	560		
Provision for discount allowed	270		

Abridge Statement Financial Position as of 31/3/20x1

			Non-Current Tangible Assets	
Current liabilities			Current Assets	
Payables	7,639		Receivables	11,246
Less provision for discount received	191	7,448	Less provision for bad debts	(229)
			Less provision for doubtful debts	(560)
			Less provision for discount allowed	(270)
				10,367

Abridged Income Statement (Profit or Loss Account) for Year Ended 31/3/20x2

Bad debts	372	Bad debts received	69
Discount allowed	186	Discount received	94
Provision for bad debts (increase)	87	Provision for discount received	45
Provision for doubtful debts (increase)	214		
Provision for discount allowed (increase)	270		

Abridged Income Statement of Financial Position as of 31/3/20x2

Current Liabilities			Current Assets				
Payables		9,421	Receivables			15,788	
Less provision for disc.rec.	(236)	9,185	Less provision for bad debt	316			
31/3/20x2			Less provision for doubtful debt	774			
			Less provision for disc. All.	540		(1,630)	14,158

Abridged Income Statement for Year Ended 31/3/20x3

Bad debts	205	Bad debt recovered	55
Discount allowed	410	Discount received	110
Provision for discount received	66	Provision for doubtful debt (decease)	253
		Provision for discount allowed (decrease)	170
		Provision for bad debt (decease)	103

Abridged Statement of Financial Position (Balance Sheet) as of 31/3/20x3

			Non-current Assets			
Current Liabilities			Current Assets			
Payables			Receivables		10,637	
	6,800					
Less provision for disc. Rec.	(170)	6630	Less provision for bad debts	214		
			Provision for doubtful debt	521		
			Provision for discount allowed	410	(1,144)	9,493

Workings

1. Provision for bad debts

   2/100 x 11426 = ₦229

2. Provision for doubtful debts:

   Receivables balance 11,426

Less provision for bad debts 229

11,197

5/100x 11197 = ₦560

3. Provision for discount received

$$\frac{2½ \text{ x } 7.639}{100} = ₦191$$

4. Provision for bad debts

$2/100\ x\ 15{,}788 = N316$

5. Provision for doubtful debts

Receivables balance	15,788
Less provision for bad debts	316
	15,472
$5/100\ x\ 15{,}472 =$	₦774

6. Provision for bad debts

2/100 x 10,637= ₦213

7. Provision for doubtful debts

Receivable's balance	10,637
Less provision for bad debts	213
	10,424
$5/100\ x\ 10{,}424 =$	₦521

8. Provision for discount received

$$\frac{2½\ x\ 6.800}{100} = ₦170$$

15.8 Prepaid Expenses/Prepayments

These are expenses which are not yet due but have been paid as of the trial balance date. They are expenses paid for a period after the statement of financial position date. They can also be regarded as the value of benefits not yet enjoyed but which had been paid for as of the trial balance date. In the final accounts prepaid expenses shall be treated as follows:

In the statement of financial position -
Deduct the prepayments from the expenses shown on the trial balance in order to obtain the expenses incurred.

In the statement of financial position -
Show the prepayments under current assets.

15.9 Accrued Expenses/Accruals

These are expenses due, but which are not yet paid as of the statement of financial position. They are expenses not yet paid for a period ending at the trial balance date. They can be regarded as the value of benefits already enjoyed but not yet paid for as of the statement of financial position date. In the final accounts, accruals shall be treated as follows.

In the statement of profit or loss:

Add the accrued expenses to the expenses shown on the trial balance to obtain the expenses incurred.

In the statement of financial position:
Show the accruals under current liabilities

Methods of Accounting for Accruals and Prepayments

i. The Arithmetic Approach

Under this approach, the items in accruals and prepayments are shown in the income statement as an additions and deductions without showing the ledger accounts.

ii. The Ledger Approach

Under this approach, specific ledger accounts are opened to deal with each expense and income in which accruals and prepayment are involved.

Revision Questions

Multiple Choice Questions

1. The debts that had become clear that the receivables cannot pay whole is known as….
   a. Doubtful
   b. bad
   c. irrecoverable
   d. allowance
2. The revenues that have been earned, but which are to be received as of the end of the accounting period is called---------------
   a. Prepaid
   b. Accrued
   c. Expense
   d. income
3. Bad debts written off can be recorded in the general journal (ignoring narrative) as follows:
   a. Debit both individual debtor's and debtors control accounts and credit bad debts account.
   b. Debit bad debts account and credit both individual debtor's and debtors control accounts.
   c. Debit individual debtor's account and credit debtors control account.
   d. Debit bad debts account and credit individual debtor's account.
4. Which of the following statements best describes the reasoning behind the bad debt provision?
   a. The bad debt provision aims to estimate the bad debts of an organisation.
   b. The bad debt provision writes off the bad debts of the company.
   c. The bad debt provision matches the estimated cost of bad debts against the revenue incurred in giving rise to the potential bad debts.
   d. The provision records bad debts without taking the debt out of the books of the company thus showing the full debt owing by the debtor.
5. Which of the following methods of calculating the bad debt provision would be unacceptable?

a. As a % of sales.
b. As a % of credit sales.
c. As a % of cash sales.
d. As a % of closing debtors.

6. The following statements are correct about journal entry **EXCEPT**:
   a. The debited account titles are listed first
   b. Journal entries shows effect of transactions
   c. Each Journal entries should have a narration.
   d. Journal entries provide account balances
7. ………………. is known to be an economic resource controlled by business as a result of past events which is expected to provide future benefits to the entity.
   a. liability
   b. income
   c. assets
   d. equity
8. The cash sales of ₦400,000 took place and recorded in the books of Emeka Enterprises in March 2020. The correct double-entry is?

	DR	CR
a.	Sales Account	Cash Account
b.	Cash Account	Sales Account
c.	Cash Account	Bank Account
d.	Bank Account	Cash Account

9. A non-current asset which costs ₦100,000 on 1st June 2011 was depreciated on a straight-line basis, month by month, at 10% per annum and was traded-in against a new non-current asset on 1st February 2019. The new non-current asset costs ₦150,000 but the company only had to pay ₦120,000. The calculated profit or loss on disposal of the non-current asset will be....................................
   a. ₦7,500 loss.
   b. ₦7,500 profit.
   c. ₦12,500 loss.
   d. ₦12,500 profit.
10. The following information was extracted from the cash book of Mr. Jones for the year ended 31st December 2021.

	₦'000
Balance b/d	3,590
Bank charges	87
Standing order	635
Direct credit	583
Dishonoured cheques	135

You are required to calculate the closing balance on Mr. Jones adjusted cash book.

a. ₦2,585,000
b. ₦3,538,000
c. ₦3,583,000
d. ₦4,580,000

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
A	B	B	C	C	D	C	B	B	C

Theory Questions

1. Musheshe Enterprises makes account to 31st March annually. The decision to establish provisions was made on 1st April 20x0 and the following policies were established.
   i. To make provision for bad debts equals to 2% of debtors.
   ii. Provision for doubtful debts 5% of receivables less provision for bad debts.
   iii. Provision for discounts allowed for the first three years were ₦270, ₦540 and ₦370.

On 31st March of each of the following year, the balances of debtors and creditors ledgers were as given below:

	31/3/20x1	31/3/20x2	31/3/20x3
Year ended	N	N	N
Trade receivables	11,426	1,588	10,637
Trade payables	7,639	9,421	6,800
Bad debts	410	372	205
Bad debts recovered	60	69	55
Discount allowed	203	186	410
Discount received	87	94	110

a. You are required to prepare for each year the necessary provision accounts on the assumption that bad debts and bad debts recovered are written into the provision for bad debts account and the discounts are written into their respective provision's accounts.
b. Show the abridged income statement and statement of financial position for each year.

CHAPTER SIXTEEN

PROPERTY, PLANT & EQUIPMENT, DEPRECIATION AND PROVISION FOR DEPRECIATION AND DISPOSAL

16.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Meaning of depreciation
ii. Causes of depreciation
iii. Reasons for depreciating assets
iv. Various methods of depreciation
v. Meaning of asset disposal.

16.2 Introduction

The relevant accounting standards dealing with Accounting for Property, Plant and Equipment and Depreciation were SAS 3 and SAS 9 respectively, but IAS 16 has now through more light on the treatment of this. PPE is classified as a non-current asset in the statement of financial position.

16.3 Depreciation Defined

Depreciation is the permanent and continuous decrease in the value of assets. Therefore, depreciation is the measure of the wear and tear of an asset or measure of obsolescence. Assets do not remain in value over time even if not used, for example, a motor car purchased 4 years ago and packed at the garage will not be worth as much as the value at which it was purchased then, talk less if put to use. Depreciation therefore is the continuous loss in value of assets; such assets are qualified for replacement in the future after which they might have depreciated to zero or negligible value. The main purpose of depreciation is to write off the costs of the assets over their estimated useful life.

The main factors, which are responsible for depreciation, are therefore: -

1. Wear and tear due to use, erosion, rust, rot, decay etc.
2. Obsolescence due to new technology e.g., Computer instead of typewriter.
3. Passage of time, as time goes by, the asset reduces in value because of its age.

4. Usage, when an asset is being used, its strength and capability are diminishing.

Only fixed tangible assets are subject to depreciation while amortisation is used for intangible assets.

16.3.1 Purpose of Depreciation

1. The main purpose is to spread the cost of an asset over its estimated useful life (matching convention).
2. To ensure that the profit of a period is not unduly overstated by charging the correct depreciation.
3. The prudence principle would have been compiled with.

16.3.2 Factors to be Considered Before Charging Depreciation

1. **Cost:** This is the sum total of the cost of acquisition of the asset, cost of installation, legal cost of purchase and all other costs incurred in bringing the asset to its present location or condition. This is the amount that will be spread over the useful life of the asset after the scrap value has been deducted.
2. **The life span of the Assets**: This is the length of time the asset can be useful before being scrapped. It is a function of tear and wear to which the asset is subjected. The life span is a measure of physical deterioration and change in technology.
3. **Scrap Value of an Asset**: This is the residual value of an asset after it has been fully depreciated. This is the value at which the asset can be disposed of at the end of its useful life. The cost of an asset will be reduced by this amount before the depreciation rate is applied to it. The cost and the scrap value are referred to as the depreciation base. After the estimated useful life of an asset, the 'Carcas' or leftover is referred to as scrap, while scrap value is what the Carcas or the scrap can be sold for, that is the takeaway or disposable value.
4. **Accounting Policy**: There are so many bases by which depreciation can be provided on a depreciable asset, whichever basis is chosen, becomes the accounting policy with respect to that asset.

16.4 Policies That Can Be Adopted

i. Charging full-year depreciation in the year of purchases and sales of the assets.
ii. Charging full depreciation in the year of purchases without charging any depreciation in the year of sales.
iii. Charging depreciation from data of purchases and providing depreciation of data of disposal.
iv. Charging no depreciation in the year of purchases and sales.

If there should be any change to the alternative policy adopted the reason for the change and the effect on the financial statement must be disclosed. In other words, any of the above depreciation policies can be adopted depending on which the management prefers.

16.5 Methods of Depreciating Assets

Assets are depreciated using the following methods.

A business can adopt any of the following methods: -

1. Straight line or fixed instalment method.
2. Reducing balance method.
3. Sum of the digits method.
4. Revaluation or depletion method.
5. Service unit method.
6. Machine hour method
7. Sinking fund method
8. Endowment Policy method

16.5.1 The Straight-Line Method

Every year, throughout the useful life of the asset, the same depreciation is charged to the profit and loss account. For this reason, it is also called the fixed instalment method, uniform rate method or fixed charge method. The yearly depreciation will be the same throughout the life of the asset.

Under the method, depreciation is determined by applying the depreciation rate to the difference between the cost and the scrap value of the asset or by dividing the difference between the cost and the scrap value by the number of estimated useful life of the asset.

Formula

a. (Cost minus scrap value) x depreciation rate (while depreciation rate is 1/estimated useful life)
b. $\frac{\text{Cost} - \text{scrap value}}{\text{Year of useful life}}$

Advantages

The same amount of depreciation is charged each year; therefore, it is simple to calculate and understand. The calculation is straightforward.

It is easy to determine the book value independently at the end of any year.

Disadvantages

a. Assets may not practically depreciate by an equal amount each year over their useful life, as an asset is used more while new.
b. When a new asset of the same class is purchased calculation of depreciation will have to be calculated separately in the year of purchase.
c. It does not consider that an asset is less used when getting older.

The straight-line method can be applied to assets that depreciate slowly. In this class are – leasehold land and freehold buildings, patents and some special-purpose machines.

Illustration 1

A machine was purchased by XYZ Ltd in April 2012 for ₦80,000. It is estimated that it will realise a scrap value of ₦4,000 at the end of its useful life which is 5 years.

Depreciation is provided on straight-line method and full depreciation is charged in the year of purchase. The accounting year end of XYZ Ltd is 31st December.

You are required to show:

1. Prepare depreciation amount for each year.
2. The journal entries for depreciation for the first three years
3. The ledger accounts for
    a. Depreciation and
    b. Machine
4. Prepare how the machine will appear in the balance sheet at the end of year 3.

Solution	₦
Cost	80,000
Less scrap value	4,000
Estimated useful life 5 years	
Annual depreciation charge	76,000 / 5

₦15,200 (This will be the yearly depreciation)

(a) XYZ Ltd

JOURNAL ENTRIES

	DR N	CR N
31/12/12 Profit and loss account	15,200	
31/12/12 Provision for depreciation		15,200
Being depreciation charged to the profit & loss account in 1912		
31/12/13 Profit and loss account	15,200	
31/12/13 Provision for depreciation		15,200
Being depreciation charged to the profit & loss account in 2013		
31/12/14 Profit and loss account	15,200	
31/12/14 Provision for depreciation		15,200
Being depreciation charged to the profit & loss account in 2014		

PROVISION FOR DEPRECIATION ACCOUNT

		N			N
31/12/12	Bal. c/d	15,200	31/12/12	Profit and Loss	15,200
31/12/13	Bal. c/d	30,400	1/1/13	Bal b/d	15,200

			31/12/13	Profit & Loss	15,200
		30,400			30,400
31/12/14	Bal. b/d	45,600	1/1/14	Bal. b/d	30,400
			7/12/14	Profit & Loss	15,200
		45,600			45,600
			1/1/15	Bal. b/d	45,600

MACHINE ACCOUNT

		N			N
1/4/12	Bank	80,000	31/12/12	Bal. c/d	80,000
1/1/13	Bal. b/d	80,000			
1/1/14	Bal. b/d	80,000	31/12/13	Bal. c/d	80,000
1/1/15	Bal. b/d	80,000	31/12/14	Bal. c/d	80,000

Please note that in the machine account, since there is no purchase or sale of assets of the same class within the period, the assets account will be carried down at the same amount (cost) every year. The fixed asset account and provision for depreciation account are shown separately, whatever method is used.

(c) Statement of Financial Position extract as of 31/12/13 (asset side only)

	₦
Machine at cost	80,000
Less depreciation	45,600
Net book value	34,400

Under the straight-line method, the net book value can be determined easily at the end of a particular period. Using the above illustration at the end of year 3.

Fixed Asset

	Cost	Accum. Depr.	Net Book Value
	₦	₦	₦
Machine	80,000	45,600	34,400

When another asset of the same class is purchased the depreciation on the old asset and the new asset will be calculated separately. But the total depreciation to be charged to the profit and loss account for that period in respect of the asset is the sum total of the depreciation calculated, the next illustration shows it clearer.

Illustration 2

Machine X was purchased on 1st April 1912 for ₦80,000 and machine Y was purchased on 1st January 1913 for ₦75,000. The estimated useful life of each of the machines is 5 years. Machine X has a scrap value of ₦4,0000 at the end of the 5 years, while machine Y has no scrap value. Depreciation is charged on a straight-line basis.

You are required to show

a. Machine account for the three years ended 31/12/14. Show the balance on the machine account at the end of each year.
b. Provision for depreciation accounts for the same period.
c. How the machine account would appear on the balance sheet as of 31/12/14.

Solution

Workings

Year	Particulars	Machine	Machine	Total Depreciation
		₦	₦	₦
2012	Cost	80,000		
	Less scrap value	4,000		
		76,000		
	Depreciation at 20%	15,200		15,200
Year 2	Net book value 4,000 +	60,800		
	Cost of machinery/NBV	64,800	75,000	30,200
	Deprecation at 20%	15,200	15,000	
Year 3	Net book value	49,600	60,000	30,200
	Deprecation at 20% of cost	15,200	15,000	
		34,000	45,000	

(a) MACHINE ACCOUNTS

		N			N
1/4/12	Bank	80,000	31/12/12	Bal. c/d	80,000
1/1/13	Bal. b/d	80,000	31/12/13	Bal. c/d	155,000
1/1/13	Bank	75,000			
		155,000			155,000
1/1/14	Bal. b/d	155,000	31/12/14	Bal. c/d	155,000

1/1/15	Bal. b/d	155,000

(b) PROVISION FOR DEPRECIATION ACCOUNTS

		N			N
31/12/12	Bal c/d	15,200	31/12/12	Profit & Loss	15,200
31/21/13	Bal. c/d	45,400	1/1/13	Bal. b/d	15,200
			31/12/13	Profit & Loss	30,200
		45,400			45,400
31/12/13	Bal. c/d	75,600	1/1/14	Bal. b/d	45,400
			31/12/14	Profit & Loss	30,200
		75,000			75,600
			1/1/15	Bal. b/d	75,600

(c) Balance sheet extract as of 31/12/14

Asset side only	₦
Machinery at cost	155,000
Less: depreciation to date	75,600
Net book value	79,400

OR

Fixed Asset

	Cost	Accum. Depr.	Net Book Value
	₦	₦	₦
Machine	155,000	75,600	79,400

In answering the question, we made the assumption that full depreciation is charged in the year of purchase.

16.5.2 Reducing Balancing Method

This is a method of depreciating assets on the reduced balance or opening balance for each year.

Under this method, the depreciating rate is applied to the net book value of the asset at the beginning of the accounting year to arrive at the depreciation amount on the asset for that particular year.

For this reason, the depreciation charged in earlier years is greater than that in the latter years. i.e., year 1 depreciation greater is than that of year 2, while year 2 depreciation is greater than year 3 etc. However, the declining depreciation value will be complemented by rising repair or maintenance costs.

The method can be applied to assets that: -

i. That generates less revenue as they grow older.
ii. Whose useful lives may be difficult to determine accurately due to obsolescence.
iii. Whose maintenance costs rise as they become older.

Examples of such assets are furniture and fitting, motor vehicles and certain types of machinery e.g., computers.

Where: R = 1 – n a/c

R = rate of depreciation

n = number of estimated useful life

S = scrap value of the asset

C = original cost of the asset

For instance, the machine in illustration two with a useful life of 5 years, costs ₦80,000 and has a scrap value of ₦4,000.

$$r = 1 - \sqrt[5]{\frac{₦\,4{,}000}{₦80{,}000}}$$

Advantages

1. It is the most prudent method of depreciation as higher depreciation is matched with higher output in the early years.
2. When a new asset of the same class is purchased, the depreciation rate can be applied directly to the aggregate of the old and new.

Disadvantages of the Method

A machine which cost ₦15,000 on 1/1/12 with an estimated useful life of 4 years and scrap value of ₦30,000, is to be depreciated using the reducing balancing method.

Illustration 3

A machine which cost ₦15,000 on 1/1/12 with an estimated useful life of 4 years and scrap value of ₦30,000, is to be depreciated using the reducing balancing method.

You are required to calculate the depreciation to be charged to the accounts in each of the 4 years.

Solutions

$$\text{Depreciation rate} = 1 - \sqrt[4]{\frac{₦\,3{,}000}{₦150{,}000}} = 33\%$$

		₦
1/1/12	Cost	150,000
21/12/12	Depreciation	49,500
1/1/13	Bet book value	100,500
31/12/13	Depreciation	33,165
1/1/14	Net book value	67,335
31/12/14	Depreciation	22,221
1/1/15	Net book value	45,114
31/12/15	Depreciation	14,887
	Scrap value	30,226

Note that the scrap value is not exactly ₦30,226 at the end of year four because of the approximations in the depreciation rate used.

16.5.3 Sum of the Digits Method

This is also a method where the depreciation rate declines with successive years of the assets. Weights of 1,2,3, etc. are attached to the useful life of the asset from last year in ascending order, i.e., the last year is weighted 1 next to the last year is weighted 2 etc. until year 1 is reached and weighted the highest.

Thus, the weight of the earlier year's rank is higher than the later year, the sum total of the weights is then obtained.

Depreciation is determined, using the proportion of the year's weight to the total weight of all the year's weights.

$$\text{Each year's depreciation amount} = \frac{Weight\ of\ that\ year}{Total\ weights} \times cost\ of\ the\ asset$$

Consider an asset with a five-year life with a cost of ₦75,000 the rate of depreciation will be determined as follows, assuming no scrap value.

Year	Weight	Depreciation Rate	Depreciation Amount
1	5	5/15	5/15 x ₦75,000 = ₦25,000
2	4	4/15	4/15 x ₦75,000 = ₦20,000
3	3	3/15	3/15 x ₦75,000 = ₦15,000
4	2	2/15	2/15 x ₦75,000 = ₦10,000
5	1	1/15	1/15 x ₦75,000 = ₦ 5,000
Total	15		

The asset will be fully written off at the end of its useful life. The depreciation rate is also applied to the historical cost i.e., rate per year x cost, which makes it simple.

16.5.4 Machine Hour or Unit of Output Method

Under this method, the total number of hours that can be worked or the total number of units that can be produced throughout the useful life of the asset will be estimated or as estimated by the manufacturer.

The number of hours actually worked or unties produced in a year will be divided by these useful hours or units to obtain the depreciation rate for that year. The rate will be applied to the cost less scrap value to obtain the charge to the profit and loss account for that year.

Assets that can be depreciated using this method are motor vans and production machines. However, it should be possible to provide some depreciation when the asset is idle.

Illustration 4

A motor vehicle which costs ₦60,000 is expected to run 400,000 kilometres throughout its useful life. In years 1 and 2, the car travelled 160,000 km and 120,000 km, respectively. Calculate the depreciation charges to the Profit and Loss Account for each of the two years.

SOLUTION

Depreciation for any year $= \frac{km\ run\ for\ that\ year}{Total\ km\ capacity\ of\ the\ car} \times Cost$

Year 1 depreciation $= \frac{160{,}000\text{km} \times \text{₦}60{,}000}{40{,}000\text{km}} \times \text{₦}24{,}000$

Year 2 depreciation $= \frac{120{,}000\text{km} \times \text{₦}60{,}000}{400{,}000\text{km}} \times \text{₦}24{,}000$

Note that, the provision for depreciation a/cs, asset a/c, Journal Entries and Balance Sheet extract will follow the same patterns as shown under the straight-line method.

The next two methods are treated better at the advanced stage but are just discussed briefly.

16.5.5 Revaluation Method

The method is useful for depreciating assets which have a short life, and their individual values are immaterial compared with the size of the organisation.

Depreciation is provided on the entire class of such assets because of the volume of the transaction. Examples of assets in these categories are glass cups and plates, livestock, crates and loose tools.

Depreciation is calculated as the difference between the valuation of the assets at the end and at the beginning of the year.

For instance, if loose tools are valued at ₦12,500 on 31/12/12 and are valued at ₦10,000 on 31/12/13, the depreciation to be charged for the year ended 31/12/13 is ₦2,500 (12,500 – 10,000).

16.5.6 Sinking Fund Method

This is a method of depreciation where a specific amount is set aside yearly, and this amount is invested at a rate that will provide enough funds for the replacement of the asset at the end of its useful life. The method requires knowledge of advanced calculus.

16.6 Disposal of Fixed Assets and Depreciation

Disposal of fixed assets means, selling off the assets before or after the useful life. The sale of fixed assets can take place during the year or at the year's end.

16.7 Reasons for Sales or Disposal of Assets:

i. If the organisation is in a liquidity problem i.e., not enough running around cash, assets that are less useful are sold off to bail the situation.
ii. Assets that are becoming outdated may be sold off.
iii. Some assets especially, machines may no longer be required due to inadequate capacity arising from growth or expansion.
iv. Also, assets are sold when a company is winding up.

When an asset is disposed of, the asset account, which has been used to accumulate all assets in the same class, will be reduced by the cost of the asset sold. This is done by crediting the assets account and debiting the disposal account with the cost of the assets being sold. A disposal account is specially created for the sale of fixed assets.

Similarly, the provision for a depreciation account will be debited and the disposal account credited with the depreciation to date on the asset disposed of which will be recalculated separately from year 1 to the year of sale.

The disposal account having been credited with the disposal value and accumulated depreciation will disclose the profit or loss on disposal. If the debit side total is higher than the credit side total, a loss has been made on disposal but if the credit side is higher, the value that makes up the total on the debit side is profit on disposal.

Illustration 5

In Jan. 2013, Malam Abudu Ltd. Bought four machines at a cost of ₦50,000 each. Depreciation is provided at the rate of 20% per annum on cost. At the end of year three, one of the machines was sold for ₦23,750 for which a cheque was received. Show the ledger accounts to record the transactions for the third year only. The accounting year-end of the business is 31st December.

Solution

The ledger accounts relevant to this question are:

i. Machine account (for the 4 machines)
ii. Provision for depreciation account (for the 4 machines)
iii. Disposal accounts (for the 1 machine disposed of)
iv. Profit and loss account (for the company where profit or loss on the sold machine will go to).

MACHINE ACCOUNT

		N			N
1/1/15	Balance b/d	200,000	31/12/15	Disposal a/c	50,000
			31/12/15	Bal. c/d	150,000
		200,000			200,000
1/1/16	Balance b/d	150,000			

Note:

i. The balance b/d above is the total cost of the 4 machines before the disposal i.e., ₦50,000 x 4 machines.
ii. The credit side detailed as Disposal a/c on 31/12/15 was the cost of the machine sold off.

PROVISION FOR DEPRECIATION ON MACHINE

		N			N
31/12/15	Disposal of machine (wi)	30,000	1/1/15	Bal. b/d (wi)	80,000
31/12/15	Balance c/d	90,000	31/12/15	Profit and Loss	40,000
		120,000			120,000

	1/1/16	Bal. b/d	90,000

Note:

i. Balance b/d on 1/1/15 is the total depreciation on the 4 machines from 1/1/13 to 31/12/14.

ii. Profit and Loss figure of ₦40,000 for the 4 machines for year 3 and immediately, the 3 years depreciation on the machine sold is removed from the total up to date depreciation on the 4 machines the by debiting this a/c with ₦30,000.

iii. Another alternative way is to bring down the balance as shown on 1/1/15, and on 31/12/15 credit the a/c with the year's depreciation on the remaining 3 machines while only ₦20,000 will be debited to the a/c instead of ₦30,000.

DISPOSAL OF MACHINE ACCOUNTS

		N			N
31/12/15	Machine account (cost)	50,000	31/12/15	Prov. For Depr.	30,000
21/12/15	Profit and loss a/c	3,750	31/12/15	Bank	23,750
		53,750			53,750

Note that profit of ₦3,750 is made on this disposal.

PROFIT OR LOSS ACCOUNT (Extract)

	N			N
		31/12/15	Disposal of machine	3,750

Calculation of Depreciation

a. On the 4 machines assets for 1 yr = $\frac{20}{100} \times ₦200{,}000$ (₦50,000 x 4)

Accumulated Depreciation to 1/1/95 = $₦40{,}000 \times 2 = ₦80{,}000$

b. On the machines disposed of for 1 yr = $\frac{20}{100} \times 50{,}000 = ₦10{,}000$

c. Depreciation for 3 years = $₦10{,}000 \times 3 = ₦30{,}000$

What is meant by Disposal of Assets?

An asset is said to be disposed of in any of the following circumstances.

1. Sold in exchange for money.

2. Given in exchange for any other type of asset(s)
3. Destroyed and therefore scraped at small or no value at all. In each case, the ledger accounts will show as in the above illustration.

Illustration 6

My-men Ltd presents you with the following information in respect of its business on 31/12/12.

Plant and machinery at cost ₦780,000
Accumulation depreciation ₦312,000

A piece of plant which cost ₦340,000 was purchased on 5th April 2013 while on 28th June 2014, another piece of plant which cost ₦60,000 on 1st January 2007 was disposed of in exchange for an office building value at ₦185,000. No other office building prior to this date.

The depreciation rate for all types of plant and machinery is 10% on cost, while that of office building is 6%. It is the company, policy to charge full depreciation in the year purchase but depreciation is charged on disposed assets in the ratio of months the asset has been used in the year before being sold off.

You are required to prepare the following accounts in respect of the above transactions for the years ended, 31st December 1993 and 1994.

(a) i. Plant and Machinery Account
ii. Office Building Account
(b) The depreciation provision account on;
i. Plant and machinery
ii. Office building
(c) Disposal of Plant and Machinery Account

Solution

Plant and Machinery

		N			N
1/1/13	Bal. b/d	780,000	31/12/13	Bal. c/d	1,120,000
5/4/13	Bank	340,000			
		1,120,000			1,120,000
1/1/14	Bal. b/d	1,120,000	28/6/14	Disposal	260,000
			31/12/14	Bal. c/d	860,000

		1,120,000			1,120,000
1/1/14	Bal. b/d	860,000			

Office Building Account

		N			N
28/6/14	Disposal Plant	185,000	31/12/14	Bal. c/d	185,000
1/1/15	Bal. b/d	185,000			

Provision for Depreciation (Plant and Machinery)

		N			N
31/12/13	Bal. c/d	424,000	1/1/13	Bal. b/d	312,000
			31/12/13	Profit & Loss	112,000
		424,000			424,000
28/6/14	Disposal Account	195,000	1/1/14	Bal. b/d	424,000
31/12/14	Bal. c/d	328,000	31/12/14	Profit & Loss	99,000
		533,000			523,000
			1/1/15	Bal. b/d	328,000

Provision for Depreciation on Office Building

		N			N
31/12/14	Bal. c/d	11,100	31/12/14	Profit & Loss	11,100
			1/1/15	Bal. b/d	11,100

Disposal of Machinery Account

		N			N
28/6/14	Plant & Machinery	260,000	28/6/14	Prov. For Depr.	195,000
31/12/14	Profit & Loss	120,000	28/6/14	Office Building a/c	185,000
		380,000			380,000

Revision Questions

Multiple Choice Questions

1. In accounting amortisation usually relates to---------assets.
   a. non-current
   b. tangible
   c. current
   d. intangible
2. The properties of the business that can be seen, felt and touched are called------- assets.
   a. intangible
   b. fictitious
   c. wasting
   d. tangible
3. The International Accounting Standard (IAS) on Property, Plant and Equipment (PPE) is ---
   a. 10
   b. 12
   c. 14
   d. 16
4. Depreciation is allocated, so as to charge a fair proportion of depreciable amount in each accounting period during the expected useful life of -----------------
   a. Expenditure
   b. Capital
   c. Assets
   d. income
5. Depreciation charged on non-current assets can be described as the …………
   a. salvage value of a non-current asset
   b. amount spent to buy a non-current asset
   c. amount of money spent in replacing non-current assets
   d. part of cost consumed during its period of use by the company
6. Which of the following is NOT a cause of depreciation of non-current assets?

a. Inflation
b. Depletion
c. Obsolescence
d. Effluxion of time

7. Depreciation of non-current assets is matched against revenue in the account of not-for-profit-organisation in the…………………
   a. income statement.
   b. cash and bank account.
   c. receipts and payments account.
   d. income and expenditure account.
8. As part of the initial investment, a partner contributed office equipment that originally cost ₦20,000,000 and on which accumulated depreciation of ₦12,500,000 had been recorded. If the partners agree on the valuation of ₦9,000,000 for the equipment, what amount should be debited to the office equipment account?
   a. ₦7,500,000
   b. ₦9,000,000
   c. ₦12,500,000
   d. ₦20,000,000
9. A machine was bought on January 1, 2019, at a cost ₦250,000. It has an expected useful life of 8 years with ₦10,000 scrap value at the end of its useful life. What is the annual depreciation charge using straight line method?
   a. ₦75,000
   b. ₦60,000
   c. ₦45,000
   d. ₦30,000
10. The technique used to measure the wear and tear of non-current assets is described as? COMPREHENSION
    a. Depletion
    b. Amortisation
    c. Diminution
    d. Depreciation

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
D	D	D	C	D	A	D	B	D	D

Theory Questions

1. Explain the term 'Depreciation' state why it is necessary to provide for depreciation in the accounts of a company (ICAN, May 1996).
2. Depreciation may be calculated in various ways and the following are three methods commonly adopted.
    a. The Straight-Line Method
    b. The Reducing Balance Method
    c. The Machine Hour Rate Method

You are required to;

i. Explain how depreciation is calculated under each method, and
ii. Illustrate your explanation by statements covering the first three years of the life of a particular asset suited to each case also stated why the method suits the particular asset (ICAN).

CHAPTER SEVENTEEN

PREPARATION OF FINAL ACCOUNTS IN COMPLIANCE WITH IFRS

17.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

- Meaning of final account and statement of financial position;
- Uses and importance;
- Various adjustment in the account; and
- Treatment of additional formation.

17.2 Introduction

These are the accounts prepared at the end of the accounting period to show the position of the business organisation. It includes:

i. Trading, profit and loss account
ii. Balance sheet

The form of final accounts for an organisation varies according to the nature of the activity of the business and the entity accounted for e.g., sole trader or partnership.

17.3 Trading Account

This is the account constructed for the purpose of finding the gross profit or loss of a business at a particular period. It is a revenue account and form part of the double-entry system. The trading account contains:

On the debit side:

i. Opening inventory
ii. Add Net purchases (purchases less return outwards)
iii. Less inventory at close

Equal to cost of goods sold.

On the credit side:

i. Sales
ii. Less returns inwards
iii. Credit side less debit side
iv. Equal to gross profit or gross loss.

The balance of the Trading account is transferred to the profit or loss account. The object of a trading account is to ascertain the gross profit or loss resulting from business transactions.

Period of account: The trading account shows the operation 'of the business over a period of time usually a year.

Heading: Trading account for the year ended.

LAYOUT FOR TRADING ACCOUNT

ABC Limited
Trading Account for the year ended 31st December 2020

	N	N
Sales Revenue (net of sales returns)		x
Less: Cost of Sales		
Opening Inventory	x	
Purchases (net of purchases returns)	x	
Carriage inwards	x	
Cost of goods available for sale	x	
Closing inventory	(x)	
Cost of goods sold	X	
Wages**	X	
Cost of sales		x
Gross profit		x

17.4 Statement of Profit or Loss & Comprehensive Income

This is the Statement of account constructed by a business organisation to show the net profit or net loss. It shows on the debit side the expenses incurred by an organisation and on the credit side the gross profit from trading and other gains. The profit is carried to the capital account.

17.4.1 Uses of Trading, profit or loss account

i. To show the profit of an organisation

ii. For comparison with other years

iii. For income tax assessment.

iv. For management purpose

Layout of Statement of Profit or Loss & Comprehensive Income

ABC Limited
Statement of Profit or Loss and Other Comprehensive Income for the year ended 31st December 2020

	N	N
Sales Revenue (net of sales returns)		x
Less: Cost of Sales		
Opening Inventory	x	
Purchases (net of purchases returns)	x	
Carriage inwards	x	
Cost of goods available for sale	x	
Closing inventory	(x)	
Cost of goods sold	X	
Wages**	X	X
Cost of sales		x
Gross profit		x
Other Incomes (e.g., interest, rent, commission, discount & decrease in provision for bad/doubtful debts)		x
		x
Administrative expenses	(x)	
Salaries	(x)	
Rent and rates	(x)	
Printing and stationery	(x)	
Postages and telephone	(x)	
Depreciation	(x)	
Other admin. Expenses	(x)	
		x
Distribution costs		
Sales commissions	(x)	
Salaries	(x)	
Advertising and marketing	(x)	
Transport and traveling	(x)	
Depreciation	(x)	
Other distribution costs	(x)	
		(x)
Finance cost (e.g., interest on loans and overdraft)		(x)
		(x)

Taxation		(x)
Profit/(loss) for the year		(x)
Other Comprehensive Income		
Gain on revaluation of non-current assets	x	
Actuarial gains (losses) on defined benefit plans	x	
Gains/(losses) on translation of foreign currency balances	X	
		x
Total comprehensive income for the year		x

17.4.2 Differences between trading account and profit or loss account

Trading account	Profit or loss account
Balance shows gross profit or loss	Balance shows net profit or loss
Balance will be transferred to profit or loss account	Balance transferred to capital account
Charged with cost used in goods into saleable condition nature.	Include all relevant expenses of revenue getting revenue

17.5 Statement of Financial Position

Statement of Financial Position drawn up at the end of each financial period setting forth the various assets, liabilities and capital of the organisation in a well-arranged form. The statement is not part of the double-entry therefore there is no debit or credit side. This is formerly known a Balance sheet

17.5.1 Nature of Statement of Financial Position

Statement of Financial Position is drawn up at a certain date and is not an account. It is divided into two parts showing on the left Liabilities and Capital. The Statement of Financial Position is headed thus "Statement of Financial Position as of 31st".

17.5.2 Information Disclosed by the Statement of Financial Position

i. The nature and extent of the asset.
ii. The solvency or otherwise of the business
iii. The nature of liabilities
iv. Information as to over or under trading.

17.5.3 Layout of a Statement of Financial Position

ABC NIGERIA LIMITED

STATEMENT OF FINANCIAL POSITION AS OF 31ST DECEMBER 20XX

Non – current assets:		N Cost	N Dep	N NBV	
Land and Building		xxx	(xxx)	xxx	
Plant and Machinery		xxx	(xxx)	xxx	
Premises		xxx	(xxx)	xxx	
Equipment		xxx	(xxx)	xxx	
Motor Van		xxx	(xxx)	xxx	
Furniture and fittings		xxx	(xxx)	xxx	
				xxx	
Investment				xxx	
Currents Assets:					
Inventory			xxx		
Receivables & Prepayment			xxx		
Bank			xxx		
Cash			xxx		
			xxx		
Current Liabilities					
Payables		xxx			
Overdraft		xxx			
Accruals		xxx	(xxx)		
Net working capital			xxx		
Long term liabilities					
Bank Loan		xxx			
Bond		xxx	(xxx)		
Net Assets					xxx
					xxxx
Capital				xxx	
Add Net profit					xxx
	xxx				
Less Drawings					xxx
Net Assets/Net worth				xxxx	

17.6 Post Trial Balance Sheet Adjustments

These are adjustments that are necessary to the figures appealing on the trial balance before the final accounts can be prepared. These include:

i. Accrued expenses and Prepaid expenses

ii. Accrued income (Income due not yet received)
iii. Prepaid income (Income received in advance
iv. Goods withdrawn by the proprietor for his own use
v. Unused items, other than trading stocks (e.g., stationery, catalogue etc)
vi. Correction of errors or omissions
vii. Provision for doubtful debts
viii. Provision for discount allowed to debtors
ix. Provision for discount received from creditors
x. Provision for depreciation of fixed assets (dealt with in chapter 5)

i. **Accrued expenses**: expenses which relates to a current accounting period, but which have not yet been paid or become payable. Such expenses are often described as "expenses owing." Accrued expenses must be added to the expenses charged in the Profit and Loss account and included in the balance sheet under current liabilities.
ii. **Prepaid expenses:** expenses paid during the accounting yet, but which relates to a figure accounting year. In other words, it is expenses paid in advance. The standard accounting practice is to exclude prepaid expenses from the expenses to be charged to the Profit and Loss account and included in the balance sheet under current assets.
iii. **Accrued income**: Accrued income is income due but not yet received. It is recognised in the Profit and Loss account as if it has been received and included in the Balance Sheet as Current assets. It is often described as receipt outstanding.
iv. **Prepaid income:** This is income received in one accounting year but relates to subsequent accounting year. In other words, it is income received in advance. The standard accounting practice is to exclude such income from the income to be recognised in the Profit and Loss account and included in the Balance Sheet as a current liability of the current year.
v. **Goods taken by the proprietor of the Business for own use**: The cost price of such goods is added to Drawings and deducted from Purchases. Where you are given the sales value, and it is not possible to derive the cost; then drawing is debited and sales is credited.
vi. **Unused items, other than trading stock**: Unused items, like stationery, catalogue, postage stamps, etc; is given similar treatment as prepaid expenses. They are deducted from the

total expenses related to them. They are however included in the Balance Sheet as separate items under Current Assets and described as "unused stationery" or "unused catalogue" etc.

Illustration

The following trial balances were extracted from the books of Chief Okoro as of 30 April 2020:

	₦
Sales	379,100
Purchases	251,120
Returns Inwards	2,300
Returns Outwards	1,900
Carriage inwards	300
Carriage Outward	2,100
Discount Allowed	4,600
Discount Received	6,100
Salaries and Wages	28,500
Motor expenses	10,000
Rent and Rates	7,500
Insurance	1,600
Lighting and Cooling	6,090
Stationery	24,400
General expenses	18,900
Commission received	2,000
Rent Received	5,500
Premises	180,000
Fixtures and fittings	50,000
Motor Vehicles	89,800
Trade Receivables	45,700
Trade Payables	34,500
Bank overdraft	10,000
Cash in Hand	5,000
Drawings	30,000
Inventory in trade 1/5/2020	75,200
Capital account	397,010

The following additional information was made available as of 30 April 2020:

a. Closing items: Unsold inventory ₦85,900; Unused stationery ₦2,800.
b. Expenses owing: rent ₦540, electricity ₦610, stationery ₦700.
c. Prepaid expenses were: rates ₦220; insurance ₦600.
d. Debts due from a customer, Madam Monica ₦2,500 is to be written off as bad. Madam Monica has been declared bankrupt.

e. Rental income for the month of April 2020 ₦500 has not been received.

f. Salaries and wages (₦28,500) include ₦2,000 paid to carpenter for repairs carried out in Chief OKoro private residence.

g. Chief Okoro took good costing ₦8,000 (selling price ₦15,000) for own, consumption without paying for them.

h. Motor Vehicle (₦89,800) included cost of repairs ₦9,800.

You are required to prepare a statement of comprehensive income for the year ended 30 April 2020 and a financial position as of that date.

Solution

CHIEF OKORO

STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 30TH APRIL 2020

	₦	₦
Sales ₦ (379,100-2,300)		376,800
Less: Cost of Sales: -		
Opening inventory 1/5/2013	75,200	
Purchases (243,120-1,990)	241,220	
	3,300	
	319,720	
Less: Closing inventory 30/4/2014	85,900	
		233,820
Gross Profit for the year		142,980
Add: other Income:		
Discount received	6,100	
Rent received	6,000	
Commission received	2,000	14,100
		157,080
Less: Expenses: -		
Carriage outwards	2,100	
Discount allowed	4,600	
Salaries and wages	26,500	
Motor expenses (W.9)	19,800	
Rent and rates (W.1)	7,820	
Insurance (W.1)	1,000	
Lighting and cooling (W.1)	6,700	
Stationery (W.1)	22,300	
General expenses	18,900	
Bad debts (W 3)	2,500	112,220

Net profit for the year		44,860

CHIEF OKORO

STATEMENT OF FINANCIAL POSITION AS OF 30th APRIL 2020

	₦	₦	₦
NON – CURRENT ASSETS			
Premises			180,000
Fixtures and fittings			50,000
Motor vehicles			80,000 310,000
CURRENT ASSETS			
Inventory in trade		85,900	
Trade Receivables		43,200	
Rent outstanding		500	
Prepaid expenses ₦ (220+600)		820	
Unused stationery		2,800	
Cash		5,000 138,220	
Less: CURRENT LIABILITIES			
Trade Payables	34,500		
Accrued expenses	1,850		
Bank overdraft	10,000	46,350	
Working Capital ₦ (138,220-46,350) TOTAL ASSETS LESS CURRENT LIABILITIES			91,870 401,870
FINANCED BY:			
Capital as of 1/1/2020			397,010
Add: Net profit for the year			44,860 441,870
Less: Drawings Capital as of 31/12/2020			40,000 401,870

Workings:

(1) Adjustments for accrued and prepaid expenses.

	Rents & rates	Lights & Cooling	Stationery	Insurance
	₦	₦	₦	₦
Per Trial Balance	7,500	6,090	24,400	1,600
Add: Accrued expenses	540	610	700	-
	8,040	6,700	25,100	1,600
Less: Prepaid expenses	220	-	2,800	600
Tfr to Profit or Loss A/c	7,820	6,800	22,300	1,000

(2) Dr Receivable account Cr

	₦		₦
Balance b/d	45,700	Bad debts	2,500
		Balance c/d	43,200
	45,700		45,700

Dr Bad Debts Account Cr

	₦		₦
Debtors	2,500	P & L A/c	2,500

Dr Rent received account Cr

	₦		₦
P or L A/c	6,000	Per T/B	5,500
		Balance c/d	500
	6,000		6,000
Balance c/d	500		

Dr Salaries and Wages Cr

	₦		₦
Per T/B	28,500	Drawings	2,000
		P & L A/c	26,500
	28,500		28,500

Dr Drawing account Cr

	₦		₦
Balance b/d	30,000	Balance c/d	40,000
Salaries & wages	2,000		
Purchases	8,000		
	40,000		40,000
Balance b/d	40,000		

Dr Purchases account Cr

	₦		₦
Per T/B	251,120	Drawings	8,000
		Trading A/c	243,120
	251,120		251,120

Dr Motor vehicles account Cr

	₦		₦
Balance b/d	89,800	Motor expenses	9,800
		Balance c/d	80,000
	89,800		89,800
Balance c/d	80,000		

Dr Motor expenses Cr

	₦		₦
Per T/B	10,000	P & L A/c	19,800
Motor vehicles	9,800		
	19,800		19,800

Revision Questions

Multiple Choice Questions

1. Which of the following statement is NOT a component of the published financial statements?
    a. Cash flows
    b. Cash book and subsidiary ledgers
    c. Financial position
    d. Profit or loss and other comprehensive income
2. The last step of accounting as a process of information?
    a. Recording of data in the books of accounts
    b. Preparation of summaries in the form of financial statements
    c. Communication of information
    d. Analysis and interpretation of information
3. Trading, profit or loss account is drawn up to ascertain.......
    a. Net profit or loss
    b. Depreciation
    c. Capital
    d. Foreign exchange gain or loss
4. Classify the capital expenditure in the statement of financial position as a------------
    a. non-current asset
    b. income
    c. liability
    d. expense
5. Sales - Cost of goods sold =?
    a. Net Earnings
    b. Gross Earnings
    c. Income Earnings
    d. Opening Earnings

6. The excess of current assets over current liabilities is known as.........
    a. working capital
    b. manager's capital
    c. owner capital
    d. management capital
7. Interest received should be reported in the "Statement of Cash Flows" when there are ---
    a. Cash and cash equivalents
    b. Investing activities/ Financing activities
    c. Operating activities/ Investing activities
    d. Operating activities / Financing activities

Use the following information to answer the question below.

The inventory of Honeywell Limited on 1 January 2021 was ₦50.9 million, while it was ₦8.9 million on 31 December 2021. Revenue in 2021 was ₦126.8 million and purchases amounted to ₦92.3 million.

8. The calculated cost of goods sold is …………………………………..
    a. ₦98.5 million
    b. ₦102.5 million
    c. ₦125.3 million
    d. ₦134.3 million
9. A Statement of Affairs is similar to a /an …………………..
    a. trial balance
    b. income statement
    c. statement of financial position
    d. income and expenditure account
10. Non-current assets are normally stated at cost in a firm's Statement of Financial Position. This valuation method is used primarily because of…………………..
    a. prudence.
    b. materiality.

c. matching.

d. objectivity.

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
B	B	A	A	B	A	C	D	C	D

Theory Questions

The following Trial Balance was extracted from the books of Oloke on 31st March 2020.

	Dr ₦	Cr ₦
Capital		700,000
Drawings	141,000	
Purchases and Sales	3,684,000	5,179,000
Returns	73,000	62,000
Discounts	102,000	84,000
Receivables & Payables	450,000	571,000
Inventory	343,000	
Cash at Bank	69,000	
Freehold premises	460,000	
Motor vehicle at cost	120,000	
Provision for depreciation on		
Motor vehicles		45,000
Furniture		10,000
Salaries	406,000	
Carriage inwards	222,000	
Carriage outwards	103,000	
Stationery	36,000	
Electricity	49,000	
Insurance	18,000	
General expenses	298,000	
Provision for bad debts		2,000
Bad debt	4,000	
Rent receivable		38,000
Commission		112,000
12% fixed deposit with bank	200,000	
Furniture at cost	25,000	

6,803,000	6,803,000

Additional information:

i. Inventory at close ₦318,000

ii. Expenses unpaid were: Salaries ₦18,000; Electricity ₦800

iii. Expenses prepaid were: Insurance ₦4,000 and General expenses ₦5,000

iv. Inventory of unused stationary at 31/3/96 was ₦2,500

v. Adjust provisions for bad debts to 2% of debtors and create a provision for discounts allowable at 1%.

vi. The 12% fixed deposit was placed at the bank on 1st January 1996.

vii. Depreciation is to be provided as follows: Furniture 10% on cost
Motor vehicle 20% on cost.

viii. ₦2,000 of the rent received is in respect of the next accounting year.

You are required to prepare:

1. Trading, profit or loss account for the year ended 31st March 2020.
2. Financial as of that date.

CHAPTER EIGHTEEN

CONTROL ACCOUNTS

18.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Meaning of control accounts
ii. Advantages of control accounts
iii. Sources of information for control accounts

18.2 Introduction

Control Accounts or total accounts or self-balancing ledgers system is a method of keeping ledger accounts in attempt to prove the total arithmetical accuracy of a particular ledger.

A Trial Balance is drawn up periodically to see if all the accenting items have been properly entered or posted to the ledger. The exercise may be very easy in a small business because the number of entries is relatively few.

However, when the business is large with many transactions involved, many ledgers may have to be kept and if the trial balance totals don't agree, it may result in a great deal of unnecessary checking before errors are found. Therefore, what is required is a type of "Trial Balance" for each ledger and this requirement is met by the control account. So, it is only the ledger whose control accounts do not balance that need detailed checking to find errors.

The principle on which the control account is based is simple and is as follows: -

> **If the opening balance of an account is known, together with information of the additions and deductions entered in the account, the closing balance can be calculated. The accounts are often called Total Accounts because totals are used.**

Thus, a control account for a sales ledger could be known either as a Sales Ledger control account or as a Total Debtors Account and a control account for a Purchases ledger could be known either as a Purchases Ledger Control Account or as a Total Creditors Account or bought ledger. These are the two important Control Accounts we shall concern ourselves with in this book.

The Control Accounts are merely arithmetic proofs, performing the same function as a Trial Balance to a ledger in small organisation but larger organisation may incorporate them as part of the double-entry system. In this case, the personal accounts are being used as subsidiary records.

Advantages of Control Accounts

1. It facilitates the detection of errors.
2. It serves as a control over personal accounts as fraud is made more difficult because transfers made in an effort to perpetrate fraud will have to pass the scrutiny of the official in charge of the Control Accounts.
3. Management control is aided for the speed at which information is obtained is one of the prerequisites of efficient control.
4. When drawing up the balance sheet, balances in the Control Account can be sued for debtors and creditors.

18.3 Trade Receivables or Sales Ledger Control Accounts

This is the summary of all trade receivables or customers' accounts. What enters the debit of this account is the same as that which is recorded in the debit of the customers or trade receivables account. The same thing applies to the credit side of the account.

Summary of Entries

1. Debit
    a. Sales from Sales Daybook.
    b. Dishonoured cheques or bills from the Cash Book.
    c. Interest charges on Debtors Balances
2. Credits
    a. Payments received from Debtors as recorded in the cash book.
    b. Discount allowed as recorded in the cash book.
    c. Returns inwards as recorded in the Sales Return Daybook.

18.4 Trade Payables or Purchase Ledger Control Account

This account is the summary of all the account of the trade payables or supplier in the purchases ledger. The bookkeeper in charge of the A ledger makes his accounts total ₦13.712 while the clerk in charge of the B Ledger makes his Ledger balances total ₦6,712.

Draw up the two control accounts and draw any conclusion you can from them.

SOLUTION

Trade Payables Ledger Control Account A

2010		N	2010		N
Jan 1	Bal. b/d	50	Jan 1	Bal. b/d	8,400
1-31	Returns	1,000	1-31	Purchases	14,512
1-31	Bank	7,980	1-31	Sundry charges	200
1-31	Disc. Received	420	31	Balance c/d	50
31	Bal. c/d	13,712			
		23,162			23,162
Feb 1	Balance b/d	50	Feb 1	Balance b/d	13,712

Trade Payables Ledger Control Account A

2010		N	2010		N
Jan 1	Bal. b/d	84	Jan 1	Bal. b/d	3,600
1-31	Bank	3,420	1-31	Purchases	7,372
1-31	Disc. Received	180	1-31	Sundry charges	44
1-31	Returns	652	31	Balance c/d	32
1-31	Bal. c/d	6,712			
		11,048			11,048
Feb 1	Balance b/d	32	Feb 1	Balance b/d	6,712

The control accounts reveal that there is a different of ₦2,000 between the control account for the A-ledger and the totals discovered by the bookkeeper in charge of that ledger. The B ledger seems to be correct. The obvious solution is to check the ledger entries in the A Ledger very carefully.

Example 2

Prepare the Purchases Ledger and Sales Ledger Control Account from the following details.

		N
Jan 1	Debit Balance in Sales ledger	3,694
	Credit Balances in Sales Ledger	149
	Debit Balances in Purchases Ledger	58
	Credit Balances in Purchases Ledger	983
Jan 31	Sales	8,523
	Purchases	2,938
	Cash received from Customers	6,954
	Discount Received	56
	Discount Allowed	80
	Sales Returns	193
	Purchases	100
	Sales Ledger debit transfer to Purchases Ledger	50
	Customers Bal., transferred to bad Debts a/c	25
	Cash paid to creditors	2,659
	Credit Balances in Sales Ledger	49
	Debit Balance in Purchases Ledger	83

Solution

Purchase Ledger Control Account

		N		N
Jan. 1	Balance b/d	58	Balance b/d	983
	Disc. Received	56	Purchases Daybook	2,938
	Purchased Return book	100	Balance c/d	83
	Cash Book	2,659		
	Sales ledger control(a)	50		
	Balance c/d	1.081		4,004
Feb 1	Balance b/d	83	Feb 1 balance b/d	1,081

Sales Ledger Control Account

		N			N
Jan 1	Bal. b/d	3,694	Jan 1	Bal. b/d	149
	Sales Daybook	8,523		Cash Book	6,954
	Balance c/d	49		Discount Allowed	80
				Sales Return Book	193
				Purchases Ledger	

		Control Account(a)	50
		Bad debts	25
		Balance c/d	4,815
	12,266		12,266
Bal. b/d	4,815	Balance b/d	49

NOTE:

Entries could be transferred from one control account to another. This should not look strange to you because it is possible to have a person's name in the Sales Ledger and also in the Purchase Ledger. This kind of transfer is called 'CONTRA' or "Set off."

It should be noted that Control Account is a useful took in the determination of some key missing figures (sales, purchases etc) in an incomplete records system.

Procedure

Look at the incomplete data given, draw the required Control Account format, slot in the available information from the incomplete records, the difference between the totals of the two sides represent the figure you are looking for.

Revision Questions

Multiple Choice Questions

1. The ledger that accumulates information from the sales journal is known as---------
   a. trade receivables
   b. personal
   c. revenue
   d. private
2. Which of the following describes a Control Account?
   a. List of balances.
   b. Combined ledger system.
   c. Standardised ledger system.
   d. Self-balancing ledger system.
3. Those ledger accounts that are prepared to test the arithmetical accuracy of sundry posting made to personal accounts contained in the same ledger are expressed as?
   a. Control balance
   b. Expenses
   c. Control accounts
   d. Trial balance
4. The following are relevance for preparing the control account EXCEPT?
   a. Facilitates location of errors
   b. Check the arithmetical accuracy of the ledger to which it relates
   c. Allow similar ledger accounts to be grouped
   d. Allow the provision for depreciation of non-current assets
5. Receivables' Ledger will contain the accounts of credit----------------
   a. suppliers
   b. customers
   c. individual
   d. creditors
6. Which of the following items shown on the Trade Receivable Control Account?
   a. Cash purchases

   b. Cash sales
   c. Credit sales
   d. Credit purchases
7. Which of the following statements is incorrect?
   a. The balance on the trade receivables control account in the trial balance is not affected by the balance on the bad debts account in the trial balance.
   b. The balance on the trade receivables control account is not affected by the provision for bad debts.
   c. A year end adjustment to write of bad debts reduces the debtors control account balance.
   d. The debtors balance in the balance sheet is the balance per the trial balance less the bad debt provision and the balance on the bad debt account.
8. The trade receivables' ledger can best be described as a...
   a. working paper to facilitate the preparation of the trial balance.
   b. collective term to describe individual customer accounts.
   c. source document for posting transactions.
   d. book of original entry.
9. Which of the following is NOT the purpose of a sales ledger control account? To…………………
   a. deter fraud.
   b. locate errors in the trial balance.
   c. ensures that there are no errors in the personal ledger.
   d. provides a check on the arithmetic accuracy of the personal ledger.
10. ………………………………… can best be described a Control Account?
   a. list of ledger balances
   b. combined ledger system.
   c. standardised ledger system.
   d. self-balancing ledger system.

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
A	D	C	B	B	C	A	B	C	D

Theory Questions

1. Tope maintains a system of self-checking ledger. You are asked to prepare the Sales Ledger Control account from the following figures.

	N
Debit balance January 1st	35,850
Credit balance January 1st	127
Sales	38,560
Cash received from customers	29,726
Discount Allowed	743
Returns and Allowances	1,026
Bad debts	154
Credit Balance January 31t	36

2. S. Clement keeps several Sales Ledgers and a Purchases Ledger, from the following details relating to his No 1, Trade receivables and his Trade payables, write Clement's Sales Ledger No. 1 Control and the Purchases ledger Control Account for the month of November 2010.

		N
Nov. 1	Balance of sales ledger No. 1 Control Account	2,670
	Balance of Purchases Ledger Control Account	4,140
Nov. 30	Sales for month (No. 1 a/c)	2,890
	Purchases for month	3,960
	Receipts from debtors (No. 1 a/c)	2,405
	Payment to creditors	3,920
	Discounts Allowed (No. 1 a/c)	125
	Discount received	95
	Sales Return (No. 1 a/c)	65
	Purchases Returns	145
	Transfer of debit balance from the purchases ledger Sales Ledger No. 1.	120

CHAPTER NINETEEN

MANUFACTURING ACCOUNT

19.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The meaning of manufacturing account and its composition such as:
   Prime cost, factory overhead, production cost, cost of sale etc. and their relationship.

19.2 Introduction

Manufacturing companies are business organisations, which engage in production of goods for resale to outside parties with a view to making profit. The manufacturer will convert raw materials to finished goods meant for resale. The finished goods of one manufacturer may be the raw materials for another e.g., flour is a finished good for flour mills while the same is a raw material for bakeries.

19.3 Reasons for Preparing Manufacturing Accounts

The aims of preparing manufacturing accounts include the following:

1. To determine the total cost of production (i.e., cost of manufactured goods)
2. To determine if it is more profitable to produce internally rather than to engage in buying, the finished product from elsewhere and self
3. To determine how much can be saved by manufacturing the product internally instead of buying from outside for sales.
4. To compare the cost of converting raw material consumed to that proper control will be directed to the right place.
5. To determine manufacturing profit.

19.4 Peculiar Features of Manufacturing Costs

To enhance proper control over manufacturing costs, the costs are classified according to their nature and functions.

The total cost of production is the addition of material cost, labour cost and production overhead.

Material Costs = Direct material cost + Indirect materials
+
Labour Costs = Direct labour cost + Indirect labour cost
+
Production overhead = Direct expenses + Indirect expenses cost
Production cost= Prime cost + Production overhead (Prime cost is the total cost of all direct costs).

From the above, we can see that the total production cost is made up of the prime cost plus the production overhead. These two elements are further broken down to smaller elements.

a. **Prime Cost or Direct Costs**

They are costs that are directly traceable or directly attributable to a unit of production. They are direct material costs, direct labour costs and direct expenses, they vary according to the level of production.

i. **Direct Material Costs:** They include the cost of raw materials in store plus the cost of raw materials and components and spare parts purchased for the production of the goods. The cost of carriage on the raw material will be included as part of the cost of raw materials consumed.
ii. **Direct Labour Costs:** These include the wages of the workers who engage in operation of the machines which produce the goods. They are factory workers' wages and operators' wages.
iii. **Direct Expenses**: These include royalties paid and payable, the cost of special designs and blueprint of the product and the cost of hiring a special purpose machine.

b. **Indirect Costs**

These are also referred to as factory burden, factory overhead or work overhead. These costs cannot be traced or attributed to a particular product. They are made up of indirect materials, indirect expenses, but they aid the total production process. They include:

i. **Indirect Materials:** They include all consumable materials such as lubricants, sandpapers, vanish etc.

ii. **Indirect Labour Costs**: These are wages and salaries of workers in the factory who engage in administrative work rather than being engaged in direct production e.g., wages of security men, cleaners, supervisors and foremen, store men etc.

iii. **Indirect Expenses**: They include factory power heating, electricity consumed in the factory, depreciation of plant and machinery, insurance and repairs of factory machines.

19.5 Types of Inventories of Goods

1. Inventory of raw materials
2. Inventory of work in progress or work in process
3. Inventory of finished goods
4. Inventor of consumable materials
5. Inventory of spare parts.

Work in progress are goods being manufactured and are partly completed at the time of producing the final accounts. The increase or decrease in the work in progress is deducted or added to other cost to obtain the cost of production, they can neither be described as finished goods nor raw materials.

19.6 Other Indirect Expenses

Apart from production overhead, we also have administration overhead selling and distribution overhead and financial expenses. These are expenses that are charged to the profit and loss account.

i. **Administration Expenses**: They include office salaries and wages, depreciation of office machine and furniture, office stationery, electricity, rent & rate, postage and telephone and other general office expenses.

ii. **Selling and Distribution**: These expenses relate to those of making the product known to consumers and transporting it to them. They include, advertisement costs salesman salary and commission, carriages outwards, provision for bad and doubtful debts, bad debts written off, depreciation, insurance and repairs of distribution van. Advertisement cost may be capitalised and written off to profit and loss account over some years depending on the amount and the objective.

iii. **Financial Expenses**: They include bank charges, interest on loan and overdraft and other commission that may be charged by the Bank on the business accounts.

19.7 Apportionment of Common Cost Between the Factory and The Office

Certain overhead may be incurred jointly for both the office and the factory, and such costs will have to be apportioned on certain basis to both centres since office expenses will only be accounted for in the trading and profit and loss account whereas factory expenses will be accounted for in the manufacturing account.

Some of these costs and the basis for apportioning them between office and factory are: -

COST ELEMENTS		BASIS OF APPORTIONMENT
i.	Electricity Bill	Metre reading
ii.	Rent, rates, light and heat	Area of building occupied
iii.	Depreciation of office building	Area of building occupied
iv.	Depreciation of plant & machinery, machinery, repairs & insurance	Book value or cost of the machine

FORMAT FOR MANUFACTURING ACCOUNT, AND STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

Manufacturing Account and Statement of Profit or Loss and other Comprehensive Income for the Year Ended 31st December 2022.

	N	N
Opening Inventory of raw materials		x
Purchase of raw materials		x
Purchases returns		(x)
Carriage inwards on raw materials		x
Cost of raw materials available for use		x
Closing Inventory of raw materials		(x)
Cost of raw materials used		x
Direct Wages (i.e., Manufacturing wages)		x
Direct expenses (e.g., royalty)		x
Prime cost		x

Add: Factor Overheads		
Depreciation of plant and machinery	x	
Factory light and power	x	
Foreman's salaries	x	
Factory rent	x	
Factory insurance	x	
General factory expenses	x	
Other factory overheads	x	
		x
Opening Work-In-Progress	x	
Closing Work-In-Progress	(x)	
		x
Cost of goods produced		x
Add: Manufacturing profit (mark-up) if any		x
Market value of goods produced		x
Sales		x
Less: Sales returns		(x)
		x
Less: Cost of goods sold		
Opening Inventory of finished goods	x	
Goods produced	x	
Purchases of finished goods if any	x	
Purchases returns	(x)	
Carriage on finished goods	x	
Goods available for sales	x	
Closing Inventory of finished goods	(x)	
Cost of goods sold		(x)
Gross profit (on trading)		x
Add/(Deduct): (Increase)/Decrease in provision for unrealised profit on Inventory if any		x
		x
Add: Manufacturing profit if any		x
Total gross profit		x
Add: Other Incomes		
Discount received	x	
Rent received	x	
Interest received	x	
Commission received	x	x
		x
Less: Administrative Expenses		
Admin. Salaries	x	
Office electricity	x	

Office rent and rates	x	
Printing and stationery	x	
Admin. Insurance	x	
Depreciation of office equipment	x	
Other admin. Expenses	x	
		(x)
Less: Selling and Distribution Expenses		
Salesmen's salaries and commission	x	
Bad debt	x	
Increase (decrease) in provision for bad debt	x	
Advertising	x	
Discount allowed	x	
Carriage outwards	x	
Depreciation of delivery vans	x	
		(x)
		x
Net profit for the year		
Other comprehensive Income		
Gain on revaluation of asset		x
Total comprehensive income for the year		x

<u>Goods Transferred to Statement of Profit or Loss at Cost</u>

The following balances were extracted from the books of EWUATU Enterprises a manufacturer of leather materials in Aba, on 30th September 2022.

		N
Raw materials purchased		38,720
Manufacturing wages		18,870
Factory sundry expenses		10,120
Inventory at 1/10/2022	- Raw materials	8,460
	- Work-in Progress	3,070
	-Finished goods	12,380
Sales		125,000
Depreciation	-Plant & Machinery	7,560
	-Delivery vans	3,040
	Office equipment	807
Repair of plant & machinery		3,020
Factory power		3,100
Foreman's salary		2,530
Advertising		3,556
Discount allowed		1,524
Office expenses		2,910

Rent and rates	8,400
Salesman's salaries	6,420
Carriage inwards on raw materials	2,720
Other direct factory expenses	2,100
Office salaries	5,170

Additional Information:

Rent and rates should be apportioned as follows:

Factory	50%
Administration	30%
Selling and distribution	20%

Closing Inventory on 30th September 2022 were:

Raw materials	₦ 10,985
Work-in-progress	₦ 2,460
Finished goods	₦14,570

You are required to draw up the manufacturing trading and profit & loss account of EGWUATU Enterprises for the year ended 30th September 2022.

Solution:

EGWUATU Enterprises

Manufacturing Account and Statement of Profit or Loss for the year ended 30th September 2022

	N	N
Opening Inventory of raw materials		8,460
Purchase of raw materials		38,720
Carriage inwards on raw materials		2,720
Cost of raw materials available for use		49,900
Closing Inventory of raw materials		(10,985)
Cost of raw materials used		38,915
Manufacturing wages		18,870
Direct expenses		2,100
Prime cost		59,885
<u>Factory overheads</u>		
Factory sundry expenses	10,120	
Depreciation of plant and machinery	7,560	
Repair of plant and machinery	3,020	
Factory power	3,100	
Foreman's salary	2,530	
Rent and rates (50% x 8,400)	4,200	

		30,530
		90,415
Opening work-in-progress	3,070	
Closing work-in-progress	(2,460)	
		610
Cost of goods produced		91,025
Sales		135,000
Less: Cost of goods sold		
Opening Inventory of finished goods	12,380	
Cost of goods produced	91,025	
Cost of goods available for sale	103,405	
Closing inventory of finished goods	(14,570)	
Cost of goods sold		(88,835)
Gross profit		46,165
Administrative expenses (Note 2)		
Depreciation of office equipment	807	
Office expenses	2,910	
Rent and rates (30% x 8,400)	2,520	
Office salaries	5,170	(11,407)
Selling and distribution expenses (Note 2)		
Deprecation of delivery vans	3,040	
Advertising	3,556	
Discount allowed	1,524	
Rent and rates (20% x 8,400)	1,680	
Salesmen's salaries	6,420	
		(16,220)
Net profit for the year		18,538

NOTE:

The manufacturing account ends with cost of goods produced. The statement of profit or loss commences with sales and ends with net profit (or loss). It is not necessary to show separate title for the statement of profit or loss because the initial title has already incorporated both.

Goods Transferred to Statement of Profit or Loss at Market Value

DANLADI runs a manufacturing business in Ilorin. As of 31st March 2022, the following trial balance

		DR	CR
		N	N
Purchases ledger balances			6,125
Purchase returns (raw materials)			18
Sales ledger balances		8,806	
Factory power		3,200	
Cash at bank		7,882	
Discounts		980	318
Freehold factory land and building		9,180	
Purchases of raw materials		26,418	
Office expenses		1,200	
Cash in hand		1,238	
Factory indirect expenses		1,036	
Factory wages		7,200	
Bills receivable		1,297	
Sales returns		120	
Office furniture		1,420	
Inventory	- raw materials (at cost)	3,125	
	-Work-in-progress (at cost)	1,312	
	-finished goods (at cost plus mark-up)	2,012	
Bank overdraft			9,836
Bank charges		180	
Salesmen's commissions		1,286	
Interest payments		820	
Plant and machinery		64,780	
Capital			10,120
General expenses		2,078	
Bad debt		412	
Drawings		9,693	
Provision for bad debt			415
Insurance		712	
Motor vehicles		8,000	
Purchases of finished goods		6,301	
Rates		840	
Provision for unrealised profit on Inventory			183
Loan			50,000
Office salaries		4,007	
Sales			98,520
		175,535	175,535

7

Additional information:

i. Inventory at 31st March2022 were:

Raw materials (at cost)	₦5,812
Work-in-progress (at cost)	₦1,380
Finished goods (at cost plus mark-up)	₦1,508

All the finished goods purchased during the year were sold before 31st March 2022.

ii. 10% of factory power was incurred to put the goods into a saleable condition.

iii. A professional valuer has determined that the fair value of the freehold factory land and building on 31st March 2022 was ₦12,000.

iv. Depreciation is to be charged as follows:

Plant & machinery	5%
Office furniture	10%
Motor lorries	₦900

v. Insurance premium ₦112 was prepared

vi. Bad debt provision should be made up to ₦600

vii. The motor lorries are used wholly in the factory

viii. A mark-up of 10% is normally added to cost of goods produced.

You are required to prepare for DANLADI a manufacturing, and statement of profit or loss and other comprehensive income for the year ended 31st March 2022 and statement of financial position as of that date.

Solution:

DANLADI

Manufacturing Account and Statement of Profit or Loss and Other

Comprehensive Income for the year ended 31st March 2022

	N	N
Opening Inventory of raw materials		3,125
Purchases of raw materials		26,418
Purchases returns		(18)
Cost of raw materials available for use		29,525
Closing Inventory of raw materials		(5,812)

Cost of raw materials used		23,713
Factory wages		7,200
Prime cost		30,913
Factory overheads		
Factory power (90% x 3,200)	2,880	
Factory indirect expenses	1,036	
Depreciation of plant and machinery (5% x 64,780)	3,239	
Depreciation of motor vehicles	900	
		8,055
		38,968
Opening work-in-progress	1,312	
Closing work-in-progress	(1,380)	
		(68)
Cost of goods produced		38,900
Add: Manufacturing profit (i.e., mark-up) (10% x 38,900)		3,890
Market value of goods produced		42,790
Sales		98,520
Sales returns		(120)
		98,400
Less: Cost of goods sold		
Opening Inventory of finished goods	2,012	
Goods produced	42,790	
Purchases of finished goods	6,301	
Cost of goods available for sale	51,103	
Closing Inventory of finished goods	(1,508)	
Cost of goods sold		(49,595)
Gross profit (before adjustment for movement in unrealised profit)		48,805
Add: Decrease in provision for unrealised profit (183-(1/11/x1,508)		46
Gross profit on trading		48,851
Gross profit on manufacture		3,890
Total gross profit		52,741
Add: Other Income		
Discount received		318
		53,059
Administrative expenses		
Office expenses	1,200	
General expenses	2,078	
Insurance (712-112)	600	
Rates	840	
Office salaries	4,007	

Interest payment	820	
Bank charges	180	
Depreciation of office equipment (10% x 1,420)	142	
		(9,867)
Selling and Distribution Expenses		
Factory power (10% x 3,200)	320	
Bad debt	412	
Increase in provision for bad debt (600-415)	185	
Salesmen's commission	1,286	
Discount allowed	980	
		(3,183)
Net profit for the year		40,009
Other Comprehensive Income		
Gain on revaluation of freehold factory L & B (12,000 – ₦9,180)		2,820
Total comprehensive income for the year		42,829

DANLADI

Statement of financial position as of 31st March 2022

	N	N	N
ASSETS			
Non-current assets (NBV)			
Freehold factory land and building			12,000
Plant and machinery (64,780-3,239)			61,541
Office furniture (1,420-142)			1,278
Motor lorries (8,000 -900)			7,100
			81,919
Current Assets			
Inventory –raw materials		5,812	
-works-in-progress		1,380	
-finished goods	1,508		
Prov. For unrealised profit (1/11x1,508)	(137)		
		1,371	
Trade Receivable (Note 2)	8,806		
Less: Provision for bad debt	(600)	8,206	
Bills receivable		1,297	
Prepaid insurance premium		112	
Cash at bank		7,882	
Cash in hand		1,238	
			27,298

Total Assets		109,217
EQUITY AND LIABILITIES		
Owner's Equity		
Capital at 1/4/2022		10,120
Add: Total comprehensive income for the year		42,829
		52,949
Less: Drawings		(9,693)
Owner's equity at 31/3/2022		43,256
Non-current liability		
Loan		50,000
Current Liabilities		
Trade Payables (Note 2)	6,125	
Bank overdraft	9,836	15,961
		109,217

Revision Questions

Multiple Choice Questions

1. ONE of the following does not represent an inventory in a manufacturing account.
    a. Raw materials
    b. Work – in- progress
    c. Finished goods
    d. Consumer goods

Use the following information to answer Questions 2 and 3
John Enterprises presented the following information from the financial records for the year ended 31st December 2019.

	N
Sales	56,000
Purchases	40,000
Carriage outwards	1,600
Returns inwards	900
Carriage inwards	1,300
Returns outward	1,490

2. The Gross Profit is?
    a. ₦26,290
    b. ₦15,300
    c. ₦ 16,190
    d. ₦ 17,280
3. Calculate the cost of sales.
    a. ₦ 37,800
    b. ₦ 38,700
    c. ₦ 39,810
    d. ₦ 41,802
4. Manufacturing companies are business organisations, which engage in the production of goods for resale to end users with a view of making profit. The cost of production can be classified as? (C)
    a. Material costs + Unit costs + Labour costs
    b. Labour costs + Production overhead + Direct expenses

c. Material costs + Labour costs + Production overhead

d. Conversion costs + Unit costs + Labour costs

5. In manufacturing account, the statement of profit or loss commences with sales and ends with……………

a. net profit or loss

b. income or expenditure

c. receipt or payment

d. assets or liabilities

Use the following information to answer Questions 6 and 7 below:
Extracts from the books of Okin Biscuits show:

	₦
Inventory at start	2,000,000
Inventory at close	3,800,000
Purchase of raw materials	5,000,000
Carriage inwards	275,000
Direct labour	859, 200

6. The calculated value of the raw materials consumed is………………………

a. ₦1,700,450.

b. ₦2,689,500.

c. ₦3,475,000.

d. ₦4,800,000.

7. The calculated value of prime cost is………………………

a. ₦ 2,075,000

b. ₦ 4,334,200

c. ₦ 5,879,700

d. ₦ 8,935,000

8. Which of the following will be charged as administration overhead?

a. Royalty

b. Office rent

c. Depreciation on machinery

d. Direct material cost

Use the following information to answer Question 9 and 10

SAM BEN Manufacturing company presents the following information for the period of 6months ended 30th September 2019 as thus:

	N
Purchases of Raw materials	140,000
Sales of finished goods	370,000
Distribution expenses	17,000
Direct wages	107,000
Cost of factory supervision	18,000
Rent and Rates	45,000
Inventory of Raw materials on 1st April 2018	22,000
Work in progress on 1st April 2018	17,000
Finished goods on 1st April 2018	27,000
Inventory of Raw materials 30th September 2019	23,100
Inventory of work in progress 30th September 2019	19,000
Inventory of finished goods 30th September 2019	33,000

9. The prime cost is calculated as?
    a. ₦265,900
    b. ₦255,900
    c. ₦245,900
    d. ₦235,900
10. The manufacturing cost is?
    a. ₦271,900
    b. ₦261,900
    c. ₦251,900
    d. ₦241,900

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
D	C	C	C	A	C	B	B	C	B

Theory Questions

1. Mangudu enterprises is a manufacturing company. The following balances were extracted from the company's books as of 31st December 2011

Inventories; 1/1/2011	₦
Finished goods	50,000
Work in progress	20,000
Raw Materials	23,000
Factory wages	350,000
Electricity	9,800
Carriage on raw materials	7,800
Factory Expenses	30,700
Purchases of raw materials	90,500
Factory rent rate and insurance	26,000
Sales	720,000

Additional information

a. Inventories on 31st December 2011 ₦

   i. Finished goods 30,000

   ii. Work in progress 30,000

   iii. Raw Materials 22,250

b. Prepayment of rate is 3,200

c. Accrued electricity is 400

d. Depreciation on plant and machinery 7,800

You are required to prepare manufacturing and trading Account for the year ended 31st December 2011.

2. The following information was extracted from the books of Yakubu Mohammed, a manufacturer of cosmetics for the year ended 31st October 2010.

Inventories on 1st November 2009	₦
Manufactured goods	94,400
Raw materials	30,000
Depreciation on plant & machinery	130,000
Printing and stationery	9,300
Discount allowed	37,400
Purchases:	
Manufactured goods	127,400
Carriage inwards (finished goods)	5,000
Raw materials Purchased	1,272,600
Carriage inwards (raw materials)	34,100

Receivables	217,400
Cash at Bank	171,000
Repairs to machinery	250,000
Office Rent and Rates	650,000
Carriage outwards	23,300
General expenses	31,700
Factory Rent & Rates	227,100
Cash in hand	5,700
Manufacturing wages	702,900
Travailing expenses	27,900
Sales	29,944,200
Capital	778,200
Payables	217,900

Additional Information:

a. Inventories on 31st October 2010

Raw materials ₦20,000

Finished goods ₦279,400

b. Goods manufactured are to be debited to the sales department. At net realised value of ₦2,715,000.

You are required to prepare manufacturing Trading and Profit or Loss Account for the year ended 31st October 2010

CHAPTER TWENTY

INCOMPLETE RECORDS OF ACCOUNTING

20.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand;

i. The meaning of single entry and incomplete records;
ii. The Steps involved in solving incomplete records problem; and
iii. How to make single entry to double-entry.

20.2 Introduction

Usually, most retailers do not engage the services of person who have adequate knowledge of bookkeeping neither do they know much about bookkeeping. Hence, records of transactions are not kept on double-entry principles as required in accounting. Such organisations may have information on some aspects of their operation that will help in preparation of a proper account. Some of the information that may be made available include.

a. Cash purchases and sales
b. Cash receipts and payments during the period
c. Bank statements in respect of the business account.
d. The name and account owed to suppliers of goods, normally (trade creditors)
e. The name and amount owed to them by customers.

Generally, in an incomplete records question and in practical incomplete records problems, the figures needed to prepare trading and profit and loss accounts and balance sheet are always missing and they must be derived from the scanty information available.

20.3 Calculation of Missing Figures

Basically, some techniques can be used to calculate missing figures:

20.3.1 Calculation of profit using the accounting equation

i. The basic accounting equation is that closing capital = Opening capital plus profit. Making profit the subject, then profit = closing capital less opening capital.

ii. Where the proprietor made some drawings and introduce additional capital during the period then the accounting equation will become:

Closing capital = Opening capital + additional capital + Profit – drawings

So that, profit = Closing capital + drawings – opening capital – additional capital

20.3.2

Proprietor's capital can be obtained by calculating the net assets of the organisation i.e., Net Asset = Capital of the owner.

20.3.3 Constructing a summary of cash and or bank transactions

By constructing the cash account, we will be able to calculate a missing figure such as cash taking or cash received from trade debtors, we may also be required to calculate the total cash sales for the period. The bank account may be worked back from the bank statement so that outstanding cheques may have to be adjusted for.

20.3.4 The use of sales and purchases ledger control accounts:

Control account is used to calculate any unknown figure. For instance, the sales ledger control account may be used to calculate the:

i. Credit sales figure
ii. Cash received from customers or
iii. Closing debtors, whichever of them is missing.

20.3.5 Use of gross profit percentage on sale

The trading account leads to the calculation of the gross profit. If the gross profit percentage is known, then we can calculate, the gross profit or the cost of sales as soon as the sales figure is known.

Apart from the fact that the above techniques can be used for preparing accounts from incomplete records, the techniques are also relevant for other topics such as

i. Preparation of loss claims

ii. the preparation of fund flow statement

iii. the preparation of clubs and other not-for-profit making organisation accounts.

Information that are usually available in incomplete records are: cheque stubs, receipts, closing stock.

Illustration 1

From the following list of balances, calculate the profit for the year ended 30th September 2020.

	30/9/19	30/9/20
	₦	₦
Freehold property	155,300	166,700
Plant and machinery	34,500	35,700
Fixtures & fittings	1,200	2,800
Inventories	26,500	28,000
Receivables	28,400	32,000
Bank	8,900	17,400
Loan		15,000
Payables	24,200	20,000
Loan interest		2,250

The drawings during the year ended 30/9/20 were ₦16,500 and additional capital introduced was ₦15,000.

SOLUTION:

Calculation of Net assets/statement of affairs

	30/9/19		30/9/20	
Assets	₦	₦	₦	₦
Freehold property	155,300		166,700	
Plant and machinery	34,500		35,700	
Fixtures & fittings	1,200		2,800	
Inventories	26,500		28,000	
Receivables	28,400		32,000	
Bank	8,900		17,400	
		226,400		250,600
Less Liabilities				
Loan	-		15,000	
Payables	24,200		20,000	
Loan interest	-	(24,200)	2,250	37,250
Net assets		202,200		213,350

The opening statement of affairs is as of 30/9/19 while the closing statement of affairs is as of 30/9/20 using the accounting equation.

Profit = Closing Net assets + drawing – opening net Assets – additional capital

Profit = 213,350 + 16,500 – 202,200 – 15,000 = ₦12,650

We have used the statement of affairs to calculate capital. This can also be done by using a T format account, where the assets will be on the right-hand side and the liabilities on the left-hand side, the profit or the capital as the case maybe will be the missing figure and can be derived.

<u>Illustration</u>

Mr. XEON the proprietor of a small grocery shop has requested you to prepare his accounts. He did not keep proper books of accounts. From his passbook, notebook, bank statements and oral information at formal discussions. You obtained the following figures for the year ended 31st December 2022.

	Jan 1st 2022	Dec. 31st 2022
	₦	N
Cash in hand	400	890
Bank overdraft	18,000	14,000
Furniture and fittings	2,000	2,000
Delivery Vans	3,600	3,600
Inventory	20,400	22,400
Trade Receivables	12,400	9,800
Trade Payables	9,120	8,400
Bills Payable	2,210	2,200
Bills Reviewable	3,100	3,200

During the year, Mr. Xeon used part of the Inventory for domestic affairs which was agreed at ₦1,200. He drew cash for private expenses at frequent intervals. He estimated his drawings in cash at ₦1,380 for the year. On 15th February 2022, he had introduced additional capital of ₦2,980. He has agreed to the following suggestions

i. To write off as bad debt a sum of ₦300 owed by a customer who died in May 2022.

ii. To allow 15% per annum depreciation on Furniture and Fittings and 20% per annum on delivery vans.

You are required to:

a. Ascertain the profit or loss of Mr. Xeon for the year ended 31st December 2022.
b. Prepare the statement of financial positions of the grocery shop on 31st December 2022.

Solution

(a) Calculation of profit or loss of Mr. Xeon for the year ended 31st December 2022

	₦	N
Closing Capital (W.1)		15,970
Less: Opening Capital (W.1)	12,570	
Additional Capital	2,980	
		15,550
Add: Drawing (₦1,200 + 1,380)		2,580
Profit for the year		3,000

(b) Mr. Xeon

Statement of financial position as of 31st December 2022

	N	N	N
Non-current assets (NBV)			
Furniture and fittings			1,700
Delivery Vans			2,880
			4,580
Current Assets			
Inventory		22,400	
Trade Receivables (9,800-300)		9,500	
Bills receivable		3,200	
Cash in hand		890	
			35,990
Total assets			40,570

Equity and liabilities

Owner's Equity		
Capital at 1/1/X7 (W.1)		12,570
Additional Capital		2,980
		15,550
		3,000
Add: Profit for the year		18,550
		(2,580)
Less: Drawings		15,970
Current Liabilities		
Trade Payables	8,400	
Bills payable	2,200	
Bank overdraft	14,000	24,600
Total equity and liabilities		40,570

WORKINGS

(W.1) Calculation of opening and closing capital

	Opening Capital at 1/1/2022	Closing Capital at 31/12/2022
Assets	N	N
Furniture and fittings	2,000	1,700
Delivery vans	3,600	2,880
Inventory	20,400	22,400
Trade Receivables	12,400	9,500
Bills receivable	3,100	3,200
Cash in hand	400	890
	41,900	40,570
Liabilities		
Trade Payables	(9,120)	(8,400)
Bills payable	(2,210)	(2,200)
Bank overdraft	(18,000)	(14,000)
	12,570	15,970

SINGLE ENTRY

This is an accounting system which, though does not produce a trial balance, has the relevant records to facilitate the preparation of the normal statement of profit or loss. However, these records are maintained on a single - entry basis. In a single-entry question, all the information normally available in an incomplete records question shall be provided. In addition, information regarding the amounts received and amounts paid during the year shall be provided in any of the following forms:

1. Cash book
2. Summary of bank account
3. Receipts and payments account
4. Narrative

Since the records of the transactions during the period are available, it shall be possible, as stated above, to draw up the conventional statement of profit or loss by converting the single-entry system to a double-entry system. The step-by-step procedure for doing this is outlined below.

Procedure for preparing the final accounts from single entry

1. Draw up the opening statement of affairs to ascertain the opening capital. The opening capital is obtained by deducting opening liabilities from opening assets. Where the opening statement of affairs or opening statement of financial position is given in the question, step 1 should be skipped.
2. Open ledger accounts for all items, including capital, shown on the opening statement of affairs or opening statement of financial position except:
   a. Inventory
   b. Bank/Cash, if the receipts and payments details have been given in the form of a "T" account.
3. Bring down the amounts shown on the opening statement of affairs as opening balances on the respective accounts.
4. Post or complete the double-entry for "very transaction occurring during the year. This might involve opening accounts for items for which accounts have not yet been opened per step 2. For example, if rates ₦1,000 is shown on the credit side of the cash book, complete the double-entry by debiting same amount to the rates account.
5. Carry down the closing assets and closing liabilities as closing balances on the respective accounts.
6. Trade Receivables Control Account should be dealt with in one of the two ways indicated below:

a. Where the amount received from credit customers had been credited to trade receivable control account per step 4 above, the balancing figure on the trade receivables control account represents the credit sales for the period and the trade receivables control account should closed by debiting it with that amount and crediting same to sales account.

b. Where the credit sales amount for the period had already been debited to the trade receivables control account per step 4 above, the balancing figure on the trade receivables control account represents the amount received from credit customers and the trade receivables control account should be closed by crediting it and debiting bank/cash account with this amour:

7. Trade Payables Control Account should be dealt with in one of the two ways indicated below:
   a. Where the amount paid to credit suppliers had already been debited to the trade payables control account per step 4 above, the balancing figure on the trade payables control account represents credit purchases and the trade payables control account should be closed by crediting it and debiting purchases account with this amount.
   b. Where the credit purchases amount had already been credited to the trade payables control account per step 4, the balancing figure on the trade payables control account represents amount paid to credit suppliers and the trade payables control account is closed by debiting it and crediting Bank/Cash account with this amount.
8. The balances on sales account and purchases account should be transferred to the statement of profit or loss. The opening and closing Inventory figures are then transferred to the statement of profit or loss so as to ascertain gross profit.
9. The balancing figures on the remaining incomes and expenses accounts should be transferred to the statement of profit or loss. Thereafter, the net profit or loss shall be ascertained on the statement of profit or loss.
10. Arrange closing assets, closing liabilities, capital, net profit or loss and drawings into a statement financial position.

How to ascertain SALES and COST OF GOODS SOLD using margin or mark-up

Sometimes, sales or cost of goods sold will have to be calculated using either margin or mark-up. Margin is profit expressed as a percentage of sales while mark-up is profit expressed as a percentage of cost.

Given the sales value, the cost of goods sold can be calculated by applying the margin on the sales to obtain the gross profit and deducting the gross profit from the sales. Given the cost of goods sold, the sales value can be calculated by applying the mark-up on the cost of goods sold to obtain the gross profit and adding the gross profit to the cost of goods sold.

It must be emphasised that mark-up must not be applied on sales while margin must not be applied on cc; goods sold. If necessary, margin can be converted to mark-up and vice versa as follows: -

<u>To convert margin to mark-up:</u>

Margin $= \frac{Profit}{Sales}$

: Mark-up $= \frac{Profit}{Sales-Profit}$

$= \frac{Profit}{Cost}$

If margin is 20%, what is mark-up?

Margin $= 20\% = \frac{20}{100}$

Mark-up $= \frac{20}{100-20} = \frac{20}{80} = 25\%$

<u>To convert mark-up to margin:</u>

Mark-up $= \frac{Profit}{Sales}$

: Mark-up $= \frac{Profit}{Cost+Profit}$

$= \frac{Profit}{Cost}$

If mark-up is what is margin?

If margin is $33\,^1/_3$ %, what is mark-up?

Margin = $33\,^1/_3$ % = $\frac{33^1/_3}{100}$

Mark-up = $\frac{33^1/_3}{100+33^1/_3} = \frac{33^1/_3}{133^1/_3} = 25\%$

Mr. ROY, a sole trader, provides you with the following information in respect of the year ended 30th June 2022. He does not keep proper accounting records.

(a) Summary of Bank Account

	N		N
July 1st, 2022, Balance b/d	5,950	Salaries	1,720
Cash banked	59,290	Payment to Payables	56,490
Additional capital	10,000	Cash purchases	2,650
		General expenses	1,740
		Drawings	2,770
		June 30th balance c/d	9,870
	75,240		75,240

(b) The following were paid out of cash received before being banked.

(i) Loan to a friend ₦2,000

(ii) Rent of a shop for his second wife ₦3,600

(iii) Payment for stationery ₦400

(iv) Payment for telephone bills ₦670

(c) His receipts were all in cash

(d) His assets and liabilities were as follows:

	30/6/2022	30/6/2022
	N	N
Inventory	16,800	19,600

Receivables	5,775	7,350
Payables	6,770	5,740
Accrued telephone expenses	250	170
Cash in hand	6,000	595

You are required to prepare for Mr. ROY, a statement of profit or loss for the year ended 30th June 2022, and a statement of financial position as of that date.

Solution:

Mr. ROY

Statement of Profit or Loss for the year ended 30th June 2022

	N	N
Sales (W.12)		69,790
Less: Cost of Sales		
Opening Inventory	19,600	
Purchases (W.9)	60,170	
Cost of goods available for sale	79,770	
Closing inventory	(16,800)	
		62,970
Gross profit		6,820
Less: Administrative Expenses		
Telephone expenses	750	
Salaries	1,720	
Stationery	400	
General expenses	1,740	
		(4,610)
Net profit for the year		2,210

Mr. ROY

Statement of Financial Position as of 30th June 2022

ASSETS	N	N
Current assets		
Inventory		16,800
Receivables		5,775
Cash at bank		9,870

Cash in hand		6,000
Total assets		38,445
EQUITY AND LIABILITIES		
Owner's Equity		
Capital (W.6)		37,585
Net profit for the year		2,210
		39,795
Drawings		(8,370)
		31,425
Current liabilities		
Payables	6,770	
Accruals telephone expenses	250	
		7,020
Total equity and liabilities		38,445

WORKINGS

(W.1) Statement of affairs as of 1st July 2022

	N	N
Assets		19.600
Inventory		7,350
Receivables		5,950
Cash at bank		595
Cash in hand		33,495
Liabilities		
Payables	5,740	
Accrued telephone expenses	170	
		(5,910)
Capital at 1/7/2022		27,585

(W.2) Receivables Account

	N?		N
Bal. b/d	7,350	Cash	71,365
Sales	69,790	Bal c/d	5,775
	77,140		77,140
Bal. b/d	5,775		

(W.3) Cash Account

	N		N
Bal. b/d	595	Bank	59.290
Receivables	71,365*	Drawings	2,000
		Drawings	3,600
		Stationery	400
		Telephone expenses	670
		Bal. c/d	6,000
	71,960		71,960
Bal. c/d	6,000		

(W.4) Payable Account

	N		N
Bank	56,490	Bal. b/d	5,740
Bal. c/d	6,770	Purchases	57,520
	63,260		63,260
		Bal. b/d	6,770

(W.5) Telephone Expenses Account

	N		N
Cash	670	Bal. b/d	170
Bal. c/d	250	Statement of profit or loss	750
	920		920
		Bal. b/d	250

(W.6) Capital Account

	N		N
Bal. c/d	37,585	Bal. b/d	27,585
		Bank	10,000
	37,585		37,585
		Bal. b/d	37,585

(W.7) Salaries Account

	N		N

Bank	1,770	Statement of profit or loss	1,720

(W.8) General Expenses Account

	N		N
Bank	1,740	Statement of profit or loss	1,740

(W.10) Drawings Account

	N		N
Bank	2,770	Bal. c/d	8,370
Cash	2,000		
Cash	3,600		
	8,370		8,370
Bal. c/d	8,370		

(W.11) Stationery Account

	N		N
Cash	400	Statement of profit or loss	400

(W.12) Sales Account

	N		N
Statement of profit or loss	69,790	Receivables	69,790

Illustration 2

Mr. Jafojo retired from the civil service in 2022. He decided to invest his retirement benefit and savings in a retail business. He commenced trading on 1st January 2022. The only records he kept are entries in a rough diary.

Jafojo made all his sales for cash, and he fixed his selling prices by adding 25% to the cost. He paid salaries, sundry payments out of takings. He paid takings into the bank each week after providing for a float of ₦100. The gross takings amounted to ₦129,090.

Payments during 2022 made out of takings were:

	₦
Salaries	6,100
Sundry cash payments	1,250

The remainder of the amount not banked apart from the float represented the drawings of Mr. Jafojo.

A summary of his bank account for the year is as follows:

Lodgements into bank		₦
i.	Cash paid in by way of capital	16,250
ii.	Takings paid in	112,650
iii.	Loan from Uncle (interest free)	6,000

Withdrawals from bank account include:

	₦
Fixtures and fittings	5,850
Payments to suppliers	To be determined
Rent and Rates	1,750
Insurance	600
Lighting and cooling	350
Bank charges	300

By 31st December 2022, the following information were obtained

i. Payables for goods ₦8,950 and Payables for lighting ₦175
ii. Rent was prepared to the extent of ₦145
iii. The closing inventory was valued at ₦4,350
iv. Jafojo intends to depreciate furniture and fittings by 10%

You are required to prepare:

a. Statement of profit or loss for the year ended 31st December 2022

b. Statement of financial position as of that date.

Solution

Mr. Jafojo

Statement for profit or loss for the year ended 31st December 2022

	N	N
Sales (W.3)		129,090
Less: Cost of goods sold		
Purchase (W.15)	107,622	
Closing inventory	(4,350)	
		103,272
Gross profit (25/125 x 129,090)		25,818
Less: Administration Expenses		
Salaries	6,100	
Rent and rates (W.10)	1,605	
Insurance	600	
Light and cooling (W.12)	525	
Bank charges	300	
Depreciation (W.8)	585	
Sundry expenses	1,250	
		10,965
Net profit		14,853

Mr. Jafojo

Statement of financial position as of 31st December 2022

	N	N	N
Non-current assets	Cost	Acc. Depn.	NBV
Fixtures and Fittings (W.8)	5,850	585	5,265
Current Assets			
Inventory		4,350	
Prepaid rent		145	
Cash at bank		27,378	
Cash in hand		100	
			31,973
Total Assets			37,238

EQUITY AND LIABILITIES

Owner's equity		16,250
Capital		14,853
Add: Net profit		31,103
Less: Drawings		8,990
		22,113
Non-current liability		
Loan		6,000
Current Liabilities		
Trade Payables	8,950	
Accrued lighting and Cooling	175	
		9,125
Total equity and liabilities		37,238

WORKINGS

(W.1) Bank Account

	N		N
Capital	16,250	Fixture and fittings	5,850
Cash	112,650	Trade Payables	98,672
Loan	6,000	Rent & Rates	1,750
		Insurance	600
		Lighting & Cooling	350
		Bank charges	300
		Bal. c/d	27,378
	134,900		134,900
Bal. c/d	27,378		

(W.2) Cash Account

	N		N
Sales	129,090	Salaries	6,100
		Sundry expenses	1,250
		Bank	112,650

		Drawings	8,990
		Balance c/d	100
	129,090		129,090
Balance	100		

(W.3) Sales Account

	N		N
Statement of profit or loss	129,090	Cash	129,090

(W.4) Salaries Account

	N		N
Cash	6,100	Statement of profit or loss	6,100

(W.5) Sundry Expenses Account

	N		N
Cash	1,250	Statement of profit or loss	1,250

(W.6) Capital Account

	N		N
Drawings	8,990	Bank	16,250
Bal. c/d	22,113	Net profit	14,853
	31,103		31,103
		Bal. b/d	22,113

(W.7) Loan Account

	N		N
Balance c/d	6,000	Bank	6,000

(W.8) Fixture & Fittings Account

	N		N
Bank	5,850	P or L (Depn.) (10% 5,850)	585
		Balance c/d	5,265
	5,850		5,850
Balance c/d	5,265		

(W.9) Trade Payables Account

	N		N
Bank	98,672	Purchases (W.15)	107,622
Bal. c/d	8,950		
	107,622		107,622
		Balance b/d	8,950

(W.10) Rent & Rates Account

	N		N
Bank	1,750	Statement of profit or loss	1,605
		Bal. c/d	140
	1,759		1,750
Bal. c/d	145		

(W.11) Insurance Account

	N		N
Bank	600	Statement of profit or loss	600

(W.12) Lighting & Cooling Account

	N		N
Bank	350	Statement of profit or loss	525
Bal. c/d	175		
	525		525
		Balance b/d	175

(W.13) Bank Charges Account

	N		N
Bank	300	Statement of profit or loss	300

(W.14) Drawings Account

	N		N

Cash	8,990	Capital	8,990

(W.15) Calculation of purchases

Selling price is obtained by adding 2%% to cost (given)

Cost + Profit = Sales

100% + 25% = 125%

Cost represents $\frac{100}{125}$ or $\frac{4}{5}$ of sales

Sales = ₦129,090 (given)

: - Cost of goods sold = $\frac{4}{5} \times \frac{129,090}{1}$ = ₦103,272

Add: Closing Inventory	₦ 4,350
Purchases	₦107,622

Revision Questions

Multiple Choice Questions

1. The closing balance of Adebowale Electric Limited accounts' receivable is ₦6,000,000, while the opening balance is ₦4,350,000. Amount received from the trade receivables for the period is ₦18,600,000. The estimated sales for the period are……………………..
    a. ₦7,800,000
    b. ₦8,500,000
    c. ₦9,550,000
    d. ₦11,600,000
2. Okoko Nigeria Enterprises has the following balances on its ledger accounts:

	₦ 'm
Non-Current Assets	90
Accounts Receivable	102
Bank Account	66
Accounts Payable	78

What is the equity at the start of business?

a. ₦180m
b. ₦192m
c. ₦258m
d. ₦336m

Use the following information to answer the question below.
Inventories at start and closing are ₦800,000 and ₦1,280,000 respectively, while purchases and revenue are ₦8,220,000 and ₦12,744, 000.

3. What is the value of goods available for sale?
    a. ₦7,740,000
    b. ₦9,020,000
    c. ₦10,300,000
    d. ₦11,944,000

Application

4. Davido Nigeria Limited marked up its cost at 50%. This would mean a Gross Profit of ……………… price.
    a. $33^{1}/_{3}$% on the cost
    b. $33^{1}/_{3}$% on the selling
    c. 50% on the selling
    d. $66^{2}/_{3}$% on the selling
5. The following information relates to Mowe Enterprises trading business for the year ended 31st December 2022:

	₦'000
Accounts payables on 1 January 2022	60,000
Accounts payables on 31 January 2022	56,000
Total payments during the year 2022	360,000

What is the amount of Mowe Enterprises credit purchases during the year 2022?

a. ₦244,000,000.
b. ₦356,000,000.
c. ₦364,000,000.
d. ₦420,000,000.

Use the following information to answer Question 6 and 7.

The following statement was extracted from the books of Tourey Enterprises as of 1st January 2019 as follows: Trade payables ₦4000, Bills Payable ₦1200, Capital ₦6000. Plant & Equipment ₦6000, Inventory ₦2000, Trade Receivables ₦1000, Bills Receivable ₦2000 and Cash ₦200.

6. The Net profit is calculated as?
    a. ₦720
    b. ₦620
    c. ₦420
    d. ₦320
7. The closing capital is determined as?
    a. ₦6820

b. ₦5820
c. ₦4820
d. ₦3820

Use the following information to answer Question 8

Dan Nigeria Limited present the following:

Opening Trade Receivables	₦230,000
Credit Sales	₦960,000
Receipt from Customers	₦900,000

8. The closing Trade Receivables is?
   a. ₦490,000
   b. ₦390,000
   c. ₦290,000
   d. ₦190,000
9. A firm rents out its premises and the rental agreement provides for a regular annual incremental of ₦100,000. If the first year is ₦400,000, what is the total rental in the first ten years?
   a. ₦8,500,000.
   b. ₦9,300,000.
   c. ₦9,700,000.
   d. ₦9,900,000.
10. During a financial year, a company has the following records:

Cash sales ₦20,000, Credit sales ₦100,000

Trade receivables outstanding at the beginning of the year was ₦6,000 and at the end of the year was ₦8,800. Payment by trade receivables during the year amounted to …………………………

a. ₦120,000.
b. ₦97,200.
c. ₦108,000.
d. ₦114,800

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
B	A	B	B	B	C	C	C	A	B

Theory Questions

1. The following was extracted from the books of Alhaji Hamidu on 31st December 2020.

	₦			₦
Opening balance	1,348	Cash paid to sundry payables	21,149	
Cash sales	12,479	Salaries		11,900
Cash received from sundry receivables	36,584	Advertisement	2,000	
		Electricity		246
		Rent & Rates		712
		General expenses		6,434
		Drawings		1,800
		Bal. c/d		6,167
	50,408			50,408

Additional Information

a. Balance at:

	1st January 2020	31st December 2020
	₦	₦
Inventory	4118	6278
Receivables	5600	7860
Payable for:		
Purchases	6380	6900
Electricity	140	172

b. Rent and rates prepaid 1/1/20 was ₦84 and 31/12/10 was ₦120

c. Fixed assets: original cost ₦15000

   Net book value 1/12/20 ₦10600

d. Provision for depreciation is at 10% on cost.

   You are required to prepare

i. Statement of Trading and profit or loss accounts for the year ended 31st December 2020.

ii. The statement of financial position as of that date.

2. Below is a summary of the Bank Account of Mr. Okai, trading as Okai and brother for the year ended 31/12/20.

BANK ACCOUNT

2020	₦		2020	₦
1ST Jan 2010 Bal. b/d	10000		Supplier	150,000
Customers		180,000	Office expenses	20,000
Cash sales		100,000	Salaries	40,000
			Purchases	36,000
			Insurance	3,000
			Drawing	16,000
			31/12/98 bal. c/f	25,000
		290,000		290,000

You are given the following additional information:

	1st Jan. 2020 ₦		31st Dec. 2020 ₦	
Inventories	100,000		104,000	
Receivables	50,000		60,000	
Trade payables		86,000		92,000
Expenses payables	4,000		3,600	

In addition to the above, Mr. Okai has a motor van worth ₦80,000 on 1st January 2020 which is to be depreciated at the rate of 10% per annum.

Required to:

a. Calculate the
   i. Opening capital
   ii. Total sales
   iii. Total purchases
   iv. Total expenses
b. Prepare the trading and profit or loss accounts for the year ended 31st December 2020 and a statement of financial position as of that date.

CHAPTER TWENTY-ONE

ACCOUNTS FOR NOT-FOR-PROFIT ORGANISATIONS

21.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand the;

i. Meaning of net for profit making;
ii. Various account kept; and
iii. Sources of income for a Non-profit making organisation.

21.2 Introduction

Non-profit making organisations are those societies, associations etc. that carry on activities without the sole aim of making profit but to cater for the needs of the society, members etc.

Some organisations are formed mainly to enhance the social status spiritual and material welfare of members. In effect these organisations are not formed purposely for maximizing profits. Examples of Non-Profit Making organisations are social clubs, charity organisations, human rights groups, churches, mosques. Etc

21.3 Features of Not-For-Profit Making Organisations

1. They are formed mainly to improve the welfare of members.
2. Receipts and payments accounts are used in recording the inflow and outflow of cash into and from the business, instead of the cash book.
3. Income and Expenditure accounts are used to obtain the excess income and over expenditure rather than the trading profit and loss account.
4. The difference between income and expenditure is called surplus or deficit rather than a profit or loss.
5. They derive their income mainly from subscriptions from members and other contributions rather than from trading activities.
6. Where they engage in any trading activities to sponsor their activities, a separate trading account will be prepared for that activity and the resultant net, profit or loss will be transferred to the Income and expenditure accounts

7. Accumulated funds are used to describe the net amount owed to members by the club rather than proprietors' capital.

Sources of Income to Not-For-Profit Making Organisations

a. Annual subscription by members, including registration fees paid by members on their admission.
b. Income from special activities like dances, gate taking, football matches, bazaars etc
c. Income from bar and restaurant
d. Dividend received from investments
e. Special donations by patrons and matrons and individuals.
f. Governments donation/grants

Some of the funds generated can be disbursed as follows:

a. For the publicity of the activities of the organisation.
b. Donation to charity
c. Expenses of bar and restaurant and guest house.
d. Administration and distribution expenses

The final account of the organisations is:

1. Statement of Income and Expenditure Account
2. Statement of Financial Position

Other special accounts relating to the organisation are;

1. The Receipt and Payment Account
2. Subscription Account
3. Accumulated Fund.

Where it is available, the following accounts must be prepared separately,

1. Bar trading and profit or loss Account
2. Guest house Lodging Revenue Account

The net income from these two operations should be transferred to Income and Expenditure Account.

ILLUSTRATION 1 (Where the club has a bar)

(Receipt and Payment Accounts). As of 31st Dec. 2019, you are given the following information regarding the activities of the Insight Social club:

	1st January 19	31st Dec. 19
	N	N
Cash at bank	6000	
Subscription due	3500	1000
Subscription prepaid	4000	3500
Electricity Bill paid	1600	3000
Rents prepaid	-	1500
Credit for bar suppliers	1500	4000
Bar stock	1500	2000

During the year ended 31st Dec. 2019, the following information was supplied.

	N
Subscription received	54000
Rent paid	12000
Electricity bill paid	3000
Sale of dinner dance tickets	6000
Printing of tickets	2000
Hire of halls	3000
Payment for bar purchases	15000
Bar taking	15000

You required to prepare the Receipt and Payment Accounts for the Insight Social Club for the year ended 31st December 2013.

SOLUTION

INSIGHT SOCIAL CLUB
Receipts and Payment Account for the Year Ended
31st December 2019

	N		N
Bal. b/d	6000	Rent	12000
Subscription	54000	Electricity	3000
Dance tickets	6000	Printing of tickets	2000
Bar taking	18000	Hire of hall	3000
		Bar payables	15000
		Bal. c/d	49000
	84000		84000

1/1/19 Bal. b/d	49000

Only transactions involving cash receipts and cash payments are included in the Receipts and payment Account.

21.4 Accounting for Subscriptions

Subscription is the standard amount a member will contribute per period it is uniform for all members. It is different from other special purpose contributions.

Subscriptions due from some members, for a particular period may not be fully received by the association, while some members may pay subscription covering that period and some part of the next period.

Hence, some adjustment will be required to obtain the subscription to be credited to Income and Expenditure account for the period. For instance, in our Insight Social Club example, subscription account would be as follows:

SUBSCRIPTION ACCOUNT

	N		N
1/1/13 Bal b/d	3500	1/1/13 Bal b/d	4000
2013 Income & Expend	52000	2013 Bank	54000
31/12/13 Bal. C/d	3500	31/12/13 Bal. c/d	1000
	59000		59000
1/1/14	1000	31/12/13 Bal c/d	3500

Tutorial Notes

1. The missing figure is ₦52000, and this would be transferred to Income and Expenditure accounts.
2. Subscription is an income, therefore subscription due not yet paid is an asset as such it is a debit balance.
3. Subscription received in advance is also a liability as such it a credit balance.

21.5 Accumulated Fund

It is like the proprietor's capital in a trading organisation. It is obtained by deducting the liabilities from the assets at a particular period. From out Insight social club illustrative question, we can calculate the Accumulated fund as of 1.1.19 as follows:

	N		N
Assets: 1/1/19			
Cash at bank	6,000		
Subscription due	3,500		
Bar Inventory	1,500		
Less Liabilities 1/1/19		11,000	
Subscription prepaid	4,000		
Electricity	1,600		
Credit for bar supplies	1,500	(7,100)	
Accumulated fund			3900

21.6 Bar Trading Account

i. Where all sales and purchases are not made on cash basis only, then it may be necessary to prepare account to obtain the purchases figure and the scales figure.
ii. After the Bar trading profit must have been calculated, all other expenses relating to bar activities must be deducted to obtain the bar net profit or loss. Still from our Insight Club question we can prepare the trading account.

Insight Social Club

Bar Trading Account for the Year ended 31/12/2019

	₦	₦	
Bar Sales			18,000
Less: Cost of Sales			
Opening Inventory	1,500		
Add: Purchases (wi)	17,500		
	19,000		
Less: Closing Inventory	(2,000)	17,000	
Gross Profit		1,000	
Less: Expenses		0	
Net Profit			1,000

Bar Trade Payable Account

	N		N
Cash Account	15,000	1/1/19. Baal b/d	1,500
		Bar purchases	17,500
31/12/19 Bal c/d	4,000		
	19,000		19,000
		1/1/14 Bal. b/d	4,000

In this particular, illustration, there is no expense relating to bar therefore the net profit is also the same as the gross profit. This may not be true in practice, but this is just an illustration.

21.7 Income and Expenditure Account

We can now prepare our income and expenditure account for Insight Social Club and the Statement of financial Position.

INSIGHT SOCIAL CLUB
Income and Expenditure Account
For the Year Ended 31/12/19

Income	₦	₦
Subscription	52,000	
Bar Profit	1,000	
Dinner Dance profit	4,000	57,000
Expenditure:		
Hire of Hall	3,000	
Rent (see wk i)	10,500	
Electricity Bill (wk ii)	4,400	(17,900)
Excess of Income over Expenditure		39,100

INSIGHT SOCIAL CLUB
STATEMENT OF FINANCIAL POSITION AS OF 31/12/19

Non – Current Assets	Cost	Acc Depr.	Carrying Amount
	₦	₦	₦
Non-Current Assets	=	=	=
Current Assets			
Inventory	2,000		
Cash at Bank	49,000		
Rent	1,500		
Subscription Due	1,000		53,500
Accumulated Fund & Liabilities	₦		₦
Current Liabilities			
Bar Payable			4,000
Subscription Prepaid			3,500

Electricity Bill Due			3,000
			10,500
Accumulated Fund			
Bal b/d	3,900		
Excess of Income over Expenditure	39,100		43,000
			53,500

WORKINGS

		N
(1)	RENT	
	Rent as per account	12000
	Less Rent prepare	1500
		10500
(2)	ELECTRICITY	
	As per Account	3000
	Add due not paid 31/12/13	3000
		6000
	Less due not paid 1/1/13	1600
		4400

The Recreation Club of A whire prepare accounts annually to 30th June. Just prior to the accounts being prepared for 2016, the Club treasurer disappeared. The Club committee is concerned by this and suspects that cash may have been taken. It requires detailed accounts to be prepared.

Illustration

The following is a summary of the Club's bank statement for the year ended 31st December 2016.

	N		N
Balance 1/1/2016	21,190	Bar purchases	253,680
Bank deposits	403,400	Rates	23,600
Balance 31/12/2016	13,770	Lighting	15,900
		Telephone	7,320
		Sundries	38,230
		Cigarette slotting machine rental	53,600
		Glasses and crockery	21,790
		Repairs	7,480
		Fixtures and fittings	16,340
		Bank Interest	420
	438,360		438,360

The following information is also obtained:

i. The annual subscription is ₦40 per member. The register of members totalled 13,600 on 31st December 2016. Of these, 25 had not paid the subscription for 2016, while 15 had already paid for 2017. At the beginning of 2016, 10 members were in arrears with their subscriptions. Al these were paid during the year. No subscriptions for 2016 were paid in advance at 1/1/2016. The Club wishes to take credit for subscriptions as they become due.

ii. The following non-current were owned on 31st December 2015.

	Cost	Accumulated Depreciation	Net Book Value
	N	N	N
Land and buildings	150,000	-	150,000
Fixtures and fittings	100,000	63,570	36,430

No depreciation is provided on land and buildings. The fixtures and fittings are depreciated at 25% on the reducing balance basis, a full year's depreciation being provided in the year of addition and none in the year of disposal.

iii. It is estimated that the net book value of fixtures sold was ₦3,210. The sales proceeds were ₦2,500.

iv. Assets and liabilities (other than subscriptions) were as follows:

	2016	2015
	N	N
Rates prepaid	6,470	5,390
Accrued expenses-telephone	1,520	1,360
Accrued expenses –electricity	2,790	2,510
Bar purchases Payables	14,050	15,370
Bar Inventory	32,410	21,970
Cigarette slotting machine rental Expenses accrued	4,870	4,230

v. The bar earns an average gross profit of 25% on sales.

vi. Although no cash book has been written up, an analysis of the cash vouchers showed the following expenditure:

	N
Sundry expenses	5,930
Bar wages	23,910
Repairs	6,340
Bar purchases	7,920

A float of ₦500 was in the till on 31st December 2016.

vii. From the returns of the cigarette slotting machine company, it was ascertained that the machine takings for the year amounted to ₦87,930. All takings from the machine were banked during the year.

You are required to:

a. Prepare a Bar Trading Account for the year ended 31st December 2016.
b. Prepare an Income and Expenditure Account for the same period.
c. Prepare a Statement of financial position at that date.

Solution:

(a) The Recreation Club of Awhire

Bar Trading Account for the ended 31st December 2016

	N	N
Sales		365,000
Less: Cost of sales		
Opening Inventory	21,970	
Purchases (W.2)	260,280	
	282,250	
Closing Inventory	(32,410)	
	249,840	
Bar wages	23,910	
Cost of sales (75%)		(273,750)
Bar profit		91,250

* The bar earns a gross profit of 25% on sales. Therefore, the cost of sales of ₦272,750 represents 75% of the bar sales. If the cost of sales is 75% of sales, then the bar sales will be calculated as follows:

$$\text{Sales} = \frac{273{,}750}{75\%}$$

$$= \frac{273,750}{0.75}$$

$$= ₦365,000$$

(b) The Recreation Club of Awhire

Income & Expenditure Account for the year ended 31st December 2016

	N	N
Income		
Bar profit		91,250
Net income from cigarette slotting machine (W.3)		33,690
Subscriptions (W.5)		544,000
		668,940
Expenditure		
Rate (23,600+5,390 -6,470)	22,520	
Electricity (15,000 -2,510 +2,790)	16,180	
Telephone (7,320 – 1,360 +1,520)	7,480	
Repairs (7,480 + 6,340)	13,820	
Sundry Expenses (38,230 + 5,930)	44,160	
Glasses and crockery	21,790	
Loss on disposal (3,210 -2,500)	710	
Cash stolen by treasurer (W.7)	551,430	
Bank interest	420	
		(690,900)
Deficit		(21,960)

(c) The Recreation Club of Awhire Ltd

Statement of Financial Position as of 31st December 2016

	N	N	N
Non-current assets			
Land and Building at cost			150,000
Fixtures and fittings (N.B.V)			37,170
			187,170
Current Assets			
Bar Inventory		32,410	
Prepaid rates		6,470	
Subscription in arrears		1,000	
Cash in hand		500	
			40,380
Total Assets			227,550

ACCUMULATED FUND AND LIABILITIES

Accumulated Fund		
Accumulated fund at 1/1/2016 (W.1)		211,910
Less: Deficit for the year		21,960
		189,950
Current Liabilities		
Bar Payables	14,050	
Accrued Expenses (W.8)	9,180	
Subscriptions received in advance	600	
Bank overdraft	13,770	
		37,600
Total accumulated fund and liabilities		227,550

WORKINGS

(W.1) Calculation of accumulated fund at 1/1/2016

		N	N
Assets			
Land & Buildings			150,000
Fixtures and fittings			36,430
Bar Inventory			21,970
Subscription in arrears			400
Prepaid rates			5,390
Cash at bank			21,190
			235,380
Liabilities			
Bar Payables		15,370	
Accrued expenses	- telephone	1,360	
	-electricity	2,510	
	-Slotting machine rental exp.	4,230	
			(23,470)
Accumulated fund on 1st January 2016			211,910

(W.2) Bar payables Account

	N		N
Bank	253,680	Bal. b/d	15,370
Cash	7,920	Purchases	260,280*
Bal. c/d	14,050		
	275,650		275,650

		Bal. b/d	14,050

(W.3) Cigarette Slotting Machine Account

	N		N
Bank	53,600	Bal. b/d	4,230
Income & Exp. A/c	33,690*	Cash	87,930
Bal. c/d	4,870		
	92,160		92,160
		Bal. c/d	4,870

(W.4) Fixture & fitting Account

	N		N
Bal. b/d	36,430	Disposal	3,210
Bank	16,340	Bal. c/d	49,560
	52,770		52,770
Bal. c/d	49,560		

(W.5) Subscriptions Account

	N		N
Bal. c/d (₦40 x 10)	400	Cash (W.6)	544,000
Income & Exp. Account	544,000*	Bal. c/d (₦40 x 25)	1,000
Bal. c/d (₦40 x 5)	600		
	545,000		545,000
Bal. b/d	1,000	Bal. b/d	600

(W.6) Calculation of subscription received in 2016

Total number of members in the register in 2016	13,600
Number of members who are yet to pay for 2016	(25)
Number of members who had paid for 2017 in advance	15
Number of members who paid for 2015 in arrears	10
	13,600

Subscription per member = ₦40 (given)

Subscriptions received in 2016 = ₦40 x 13,600

= ₦544,000

(W.7) Calculation of cash stolen by treasurer

	N	N
Proceeds of sale of F and F		2,500
Bar sales proceeds		365,000
Cigarette slotting machine takings		87,930
Subscriptions		544,000
		999,430
Deduct		
Cash deposited in bank	403,400	
Sundry expenses paid in cash	5,930	
Bar wages paid in cash	23,910	
Bar purchases paid for in cash	7,920	
Repairs paid in cash	6,340	
Cash in till at 31/12/2016	500	
		(448,000)
Cash unaccounted for (i.e., cash stolen)		551,430

(W.8) Accrued Expenses at 31/12/2016

	N
Electricity	2,790
Telephone	1,520
Slotting machine rental	4,870
	9,180

Where the club does not have a bar

On 1st April 2022, the assets of the Koko Youth Club were:

	N
Furniture and fittings	1,500
Games equipment	640
Tools and hobbies equipment	415
Subscriptions in arrears	30
Insurance prepaid	20

The only liability at that date was subscriptions in advance of ₦80. For the year ended 31st March2022, the treasurer produced the following summary of receipts and payments:

Receipts	N	Payments	N

Balance b/f 1/4/2022	460	Electricity	270
Subscriptions	520	Expenses of Annual Fete	310
Donations	500	New Tools	90
Sale of tickets for annual fete	590	New games equipment	60
Sales of dance tickets	670	Expenses of dance	270
		Cleaner's wages	520
		Printing & Stationery	50
		Repairs	140
		Insurance	120
		Balance c/d	910
	2,740		2,749
Bal. b/d	910		

The following additional information should be noted:

i. Subscriptions received included the amount in arrears for the previous year; ₦20 was in arrears for the current year.
ii. Repairs outstanding amounted to ₦30
iii. Annual insurance premium ₦120 were paid to 30th June 2022
iv. 10% depreciation is to be written off the balance on 31st March 2022, of furniture and fittings, games equipment and tools and hobbies equipment.

You are required to prepare:

a. A statement showing the accumulated fund as of 1st April 2022
b. The income and expenditure account for the year ended 31st March 2022, and
c. A statement of financial position as of that date.

Solution:

(a) Koko Youth Club

Statement of affairs as of 1st April 2022

	N	N
Assets		
Furniture and fittings		1,500
Games equipment		640
Took and hobbies equipment		415
Subscription in arrears		30

Insurance prepaid	20
Cash in hand at bank	460
	3,065
Liabilities	
Subscription in advance	(80)
Accumulated fund at 1/4/2022	2,985

(b) **Koko Youth Club**
Income and expenditure account for the year ended 31st March 2022

	N	N
Income		
Subscription (W.4)		590
Donation		500
Annual fete (W.7)		280
Dance (W.8)		400
		1,770
Expenditure		
Depen. on furniture and fittings (10% x 1,500)	150	
Depn. on games equipment (10% x (640+60)	70	
Depn. on tools & hobbies equip. (10% x (415+90)	51	
Insurance (W.5)	110	
Electricity	270	
Cleaner's wages	520	
Printing and stationery	50	
Repairs (W.12)	170	
		(1,391)
Surplus		379

(c) **Koko Youth Club**
Statement of financial position as of 31st March 2022

	N	N	N
Non-current assets			
Furniture and fittings (W.1)			1,350
Games equipment (W.2)			630
Tools and hobbies equipment (W.3)			454
			2,434
Current assets			
Subscription in arrears		20	
Prepaid insurance		30	
Cash at bank		910	

Total assets	960
	3,394

ACCUMULATED FUND AND LIABILITIES	
Accumulated fund at 1/4/2022	
Add: Surplus for the year	2,985
Accumulated fund at 31/3/2022	379
	3,364
Current Liabilities	
Accruals	30
Total accumulated fund and liabilities	
	3,394

WORKINGS

(W.1) Furniture and Fittings Account

	N		N
Bal. b/d	1,500	I & E account (Depn.)	150
		Bal. c/d	1,350
	1,500		1,500
Bal. b/d	1,350		

(W.2) Games Equipment Account

	N		N
Bal. b/d	640	I &E account (Depn.)	70
Cash book	60	Bal. c/d	630
	700		700
Bal. b/d	630		

(W.3) Tools and Hobbies Equipment Account

	N		N
Bal. b/d	415	I &E account (Depn.)	51
Cash book	90	Bal. c/d	454
	505		505

Bal. b/d	454		

(W.4) Subscriptions Account

	N		N
Bal. b/d	30	Bal. b/d	80
I and E account	590*	Cash book	520
		Bal. c/d	20
	620		620
Bal. b/d	20		

(W.5) Insurance Account

	N		N
Bal. b/d	20	I &E account	110*
Cash book	120	Bal. c/d	30
	140		140
Bal. b/d	30		

(W.6) Donations Account

	N		N
I and E Account	500	Cash book	500

(W.7) Annual Fete Account

	N		N
Cash book	310	Cash book	590
I & E Account	280*		
	590		590

(W.8) Dance Account

	N		N
Cash book	270	Cash book	670
I & E Account	400*		
	670		670

(W.9) Electricity Account

	N		N

Cash book	270	I & E Account	270

(W.10) Cleaner's Wages Account

	N		N
Cash book	520	I & E account	520

(W.11) Printing and Stationery Account

	N		N
Cash book	50	I & E account	50

(W.12) Repairs Account

	N		N
Cash book	140	I & E account	170*
Balance c/d	30		
	170		170
		Bal. c/d	30

21.8 Life Membership Fund

1. Some clubs allow members who are willing and able to make large contribution, so many times the annual subscriptions. This amount may be more than ten or twenty times the annual subscription.
2. Such amount will be capitalised as life membership fund and a proportion of it will be credited to income account every year based on the number of years the fund is expected to cover the annual subscription.
3. Members who contribute this substantial fund as subscription will be excluded from yearly contribution of subscription.
4. Assume that a life membership fund is obtained from a member amounting to ₦50,000 and it is expected to last 10 years. The account entries will be as follows for year one.

	JOURNAL	DR.	CR.
(a)	At beginning of the year:	N	N

Bank	50,000	
Life membership fund		50,000
Being life membership fund received		

(b)	At the end of Yr. One		
	Life membership fund	5,000	
	Income and expenditure		5,000
	Being proportion of life membership		
	Fund credited to income		

(d) The Balance in the Life Membership Fund of ₦45000 (₦50000 – ₦5000) will remain as part of the member's fund below the Accumulate fund in the statement of financial position.

5. The usual thing is to invest such fund at a fixed rate of interest say x% The entries will then be:

JOURNAL

	Dr	Cr
	N	N
Bank	50,000	
Life membership fund		50,000
Being membership fund received		
x% investment	50,000	
Bank		50,000
Being membership fund invested		
Life membership fund	5,000	
Income and Expenditure		5,000
Being proportion of life membership		
fund credited to income		

The interest receivable or received on the investment will also be credited to the income and expenditure accounts or re-invested.

Revision Questions

Multiple Choice Questions

1. In a Not-for profit organisation, a debit balance on the subscription account is reported on…………
   a. Trading account
   b. Statement of financial position
   c. Income and Expenditure account
   d. Receipt and payment account
2. In the final accounts for Not-for-profit making organisation, capital expenditures are recorded in……..
   a. Subscription account
   b. Bar account
   c. Statement of financial position
   d. Profit or loss account
3. Which of the following is not an attribute of the ''Statement of Income and Expenditure'' under the accrual basis? It ……………
   a. records revenue items.
   b. gives effect to depreciation.
   c. records credit items in the receipts and payment accounts.
   d. Records balances of cash-in-hand and cash-at-bank

Use the following information to answer Questions 4 and 5 below:

Ikoyi club has the following information in its books of accounts for the year ended 31 December 2021.
Subscriptions account balances.
1 January 2021subscription in advance ₦45,000 and subscription in arrears ₦73,000
31 December 2021 – subscription in advance ₦68,000 and subscription in arrears ₦34,000
Subscription received during the year for:

- Year 2020 – ₦62,000
- Year 2021 – ₦487,000
- Year 2022 – ₦9,000

4. The calculated subscription to be reflected in the Income and Expenditure account for the year ended 31 December 2021 is ……………………………….
   a. ₦110,000
   b. ₦265,000
   c. ₦385,500
   d. ₦425,000
5. The estimated subscription in arrears for the year ended 31 December 2021 ……
   a. ₦15,000.
   b. ₦27,000.
   c. ₦34,000.
   d. ₦58,000.
6. Depreciation of fixed assets is matched against revenue in the account of not-for-profit-making organisation in the
   a. profit or Loss account
   b. receipts and payments account
   c. cash and Bank account
   d. income and Expenditure account
7. An equivalent term for owner's equity in Non – Trading concerns is?
   a. Accumulated fund
   b. Associated fund
   c. Consolidated fund
   d. Surplus fund
8. Accumulated fund of a club can be defined as?
   a. Initial assets of the club
   b. Total subscription of members to date
   c. Net assets as adjusted annually with surplus
   d. Net assets plus Net profit from bar

Use the information below to answer question 9 and 10

	1/1/2015	31/12/2015

	₦	₦
Subscription in advance	12,500	14,700
Subscription in arrears	14,350	18,140
Insurance prepaid	-	1,800
Other assets	34,412	28,811

Subscriptions received during the year amounted to ₦65,000.

9. How much was credited to income and expenditure account in respect of Subscription?
    a. ₦59,710
    b. ₦63,410
    c. ₦66,590
    d. ₦70,290
10. How much was the accumulated fund on 1/1/2015?
    a. ₦36,262
    b. ₦34,412
    c. ₦32,562
    d. ₦26,850

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
C	C	D	D	C	D	A	C	C	A

Theory Questions

1.
    a. State the distinguishing features of Not-for-Profit making Accounts.
    b. Contrast the Not-for-Profit making organisation accounts with that of profit-oriented business
    c. Mention and explain the major sources of Income to clubs and societies.
2. On 1st January 2015, the books of Unity Social Club show the following:

	N
Club House	24000

Furniture	3870
Motor Van	3800
Bank & Cash	3000
Bank Loan	4500
Subscription owing	1200
Subscription paid in advance	900
Unpaid printing charges	1400

During the year ended 31st December, the Club had the following transaction: -

Payment	N
Printing charges	1870
Interest on loan	2170
Bank loan repaid	2750
Salaries of staff	4130
Stationery	475
Postage	335
Furniture	4400

Receipts	N
Subscription	6000
Donations	2200
Entrance Fees	5000
Raffle Draw	2600
Concert Show	3100

Note: Subscription of ₦300 has been received for 2016

Required

a. Prepare Income and Expenditure for year ended 31/12/15
b. Prepare the Club Balance Sheet as of 31/12/15

CHAPTER TWENTY- TWO

RELATIONSHIP BETWEEN ACCOUNTING AND INFORMATION TECHNOLOGY

22.1 Learning Objectives

At the end of the chapter, the students should be able to know and understand the;

i. Importance of IT to accounting profession;
ii. Merits and demerits of IT in accounting environment; an
iii. Types of accounting software.

22.2 Introduction

Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of financial character and interpreting the information system that measures, processes and communicate financial information about an economic entity. Advancements in Computer technology have dramatically improved accounting systems and transform economic life. Computers and other digital Technologies have increased office productivity facility, rapid exchange of documents, research, collaboration with far flung partners and the collection and analysis of data. Computer technology gave all sorts of individual economic factors the new valuable tools for identifying and pursuing economic and business opportunities. Computer technology deals with the application of computers and the other telecommunications equipment to store, retrieve, transit and manipulate data.

This may also be described as anything that renders data, information, or perceived

The advancement of Technology has led in the creation of the computerised accounting systems which is commonly adopted by Business entities at present. Thus, entities need to improve their systems in order to match their information needs for better decision making. With the advent of computer-based accounting systems accountants have to cope with the resulting complexity of the flow of information through the accounting systems. Traditional accounting procedures did not accommodate sophisticated Processing devices that came with the computer-based accounting system. As the design of the computer-based accounting system Advanced from simple clerical automation too complicated integrated information systems, the accountant would no longer perform his duties around the computer but found it necessary to develop procedures to cope with the new challenges.

However, the employee of Accountants who does not consider further training on Computer Based accounting is threatened. Furthermore, the traditional accountant was not trained in the special languages and devices used in the Computer Based system. With the introduction of computer to many business applications, those business areas that involves repeated task which are often monotonous to human errors (cash, inventory control, payroll and etc) are increasingly being simplified accurately by combining the cost, effectiveness, simplicity of use, efficiency, reliability and accuracy of the computer to obtain, analyses and interpret data information for efficient business decision.

22.3 Definition

22.3.1 What Is Accounting?

In the most general terms, accounting is the process of measuring and documenting an entity's cash inflows and outflows. Accountants spend the vast majority of their days analysing large sets of financial data and are expected to make sense of it for their clients, many of whom are laypeople who have little or no accounting background.

Accounting – is defining as the process of recording a financial transaction relating to a company. The accounting process consist of summarizing, and analysing, and submission on these transactions to concern parties like the regulators, and income tax gathering units and the owners and the administration and financial markets, etc. (internal and external). The financial reports employed in the accounting are a brief of financial operations over an accounting cycle, brief a business's operations, financial status, and cash flows (Tuovila, 2019).

22.3.2 Information Technology Accounting:

Information technology accounting integrates traditional accounting principles with software and information systems to create a centralised location for storing an entity's financial data. This digitisation also simplifies the process of analysing any such data, allowing entities to identify and correct errors or inefficiencies in their financial strategies, according to Investopedia.

According to Sisk (2018) Highlighted that employing of each computer, networking, storing, and other hardware substructure and procedures to produce, process, store, safe and transfer entirely kinds of automated information, IT, so, contains any machine-driven or digital way by which a commercial office gathers, saves, recovers or uses information.

According to (Beal, n.d.) IT is the wide subject involved with all aspects of managing and processing information, especially in a sizable association or firm. IT is Beyond Computers and Networks, Although IT is often employed to define computer networks and computers, IT, in reality, contains all tiers of all the systems within an association from the operating systems to physical hardware, databases, applications, storage, servers and more. Telecommunication technologies, such as the Internet and phones are also a portion of a business information technology substructure.

The different explanations and definitions of accounting have presented different accounting experts regularly.

System- System is defined as a set of double or more related and dependent parts work together to reach a target or a particular goal. These parts can be referred to as a subsystem that works a critical function to a supportive part of the bigger system (Qamar, 2016).

22.4 Objectives of Information Technology in Accounting Profession/Environment

1. To examine the impact of technology in accounting system.
2. To identify the factors limiting the use of computer technology in the field of accounting.
3. To analyses accounting data and other business information to make informed decision.
4. To determine the impact of information technology over traditional accounting systems.
5. This enables business operations to continue seamlessly.

22.5 Importance of Information Technology in Accounting Profession

1. To develop accounting database for easy access and data base decision making.
2. Access to the storehouse of information is easy.
3. Accounting data will available universally.
4. One accountant can deal with various companies through effective utilisation of IT in accounting.

5. It enhances online data integration with other systems

22.6 Advantages of Information Technology in Accounting Environment

As mentioned above, one of the most important benefits of using technology in accounting is the ability to automate processes which in turn simplifies the Accounts Payable (AP) process, leading to:

a. **Cost-savings**: First and foremost, among the advantages of technology in accounting are the cost savings. Upfront costs are quickly regained, and savings occur in every area through increased processing capability, a reduction in time spent researching red flags, eliminating a need for paper and onsite storage and more.
b. **Security**: security is of paramount important to executive management teams. Quality technology provides an extra layer of safety, double and triple checking information at the very start to prevent errors and possible fraud.
c. **Efficiency**: Technology (and automation in particular) streamlines operations which in turn creates significant cost savings. Among other things, it enables fast and efficient processing, eliminates former roadblocks by enabling rapid changes in processes (including workflow and approvers), enhances online data integration with other systems (and thus speeds transactions), and automatically creates a digital audit trail for reference.
d. **Accessibility**: Cloud-based does not only makes technology more affordable to companies of all sizes, but it also creates a centralised and accessible storage database that can automatically collects, organises, and analyses data. Not only can this information be used for real-time reports and strategic decision-making, but it also allows for 24/7 access from any mobile device. This enables business operations to continue seamlessly - increasingly important as the work environment continues to trend towards a mobile, hybrid, or remote framework.
e. **Digitalisation**: Technology makes accounting accessible to everyone. No longer do you need an advanced degree, be a CPA, accountant or even a financial professional to understand the ins and outs of credits, debits, asset classes, etc. Today's computerised accounting packages and programs are user-friendly and typically easy to understand, helping to increase further digital adoption among employees and expand their skill sets.

22.7 Disadvantages of Information Technology in Accounting Environment

It is important to note from the start that the quality of the technology itself is a key factor when it comes to identifying both advantages and disadvantages. In addition, technology in accounting has its limitations and possible downfalls that can have a negative impact on business operations. However, acknowledging and recognizing them allows them to be addressed before they can become a major problem.

a. **Technical Issues**: When dealing with technology and computerised systems, issues can arise in everything from power outages and viruses to simply knocking a computer off a table and destroying it.
b. **Security**: The same technology that helps secures systems also creates new opportunities for cyber-attacks and fraud. This is one of the primary reasons to ensure that you have quality software as well as a cloud-based platform that can be constantly updated with new technology.
c. **Cyber limitations**: A system is only as good as the information entered, including the setup, workflow, and information entered. Proper planning and installation can go far towards mitigating effects from these limitations.
d. **Specialised Needs**: Although a standard accounting software package will generally fit most needs, businesses with specialised requirements will need to refine it or change their processes. This can involve extra time and cost.
e. **Cost**: Although software is more affordable, accessible, and result in many cost savings, the initial cost may still be more than some smaller businesses can pay and prevent entry. Note that this cost is not just monetary but also in terms of time (both for implementation and training).

22.8 Accounting Information Systems

An accounting as an information system (AIS) is a system of collecting, storing and processing financial and accounting data that are used by decision makers. An accounting information system is generally a computer-based method for tracking accounting activity in conjunction with information technology resources. The resulting financial reports can be used internally by management or externally by other interested parties including investors, creditors and tax authorities. Accounting information systems are designed to support all accounting functions and activities including auditing, financial accounting & reporting, managerial/ management accounting and tax. The most widely adopted accounting information systems are auditing and financial reporting modules. Accounting information systems equipped with these kinds of technologically advanced tools can now perform accounting functions more effectively and reduce costs. Accounting programs or software can help accountants or business owners create sales forecasts, economic business models and other business decision tools. They will also automatically input the business' financial information, limiting the number of human data entry errors. Standard defaults and mathematical verification processes are additionally important features of accounting software. These processes ensure that the company's accounting books are always in balance and do not violate any preset requirements. Small business accounting software packages are usually basic programs created with the non-accountant in mind. This allows owners and managers to complete traditional accounting functions without much formal training or technical knowledge. Small business owners may also be able to transfer this information electronically to their public accountant for tax purposes. Electronically transferring information is usually more accurate and timelier than handing over a stack of manual accounting ledgers.

Enterprise Resource Planning (ERP) Systems: The twenty first century accountants have strategic software applications in place to prepare for the future, such as Enterprise resource planning (ERP) systems. This is a software program that integrates different departments in the organisation onto the same system. This makes data available diversely and supports activities between the different departments. The information is made available through a common central database and shared through functional areas such as finance and accounting, sales and marketing, human resources, and manufacturing and production.

According to Thomas Wailgum, CIOs have told him that, “Their core ERP modules were used chiefly for accounting and financial applications (96%).” And when asked which areas of their business ERP worked best, respondents overwhelmingly cited, “The financial side of the house (70%)” (2008). ERP improves the business performance because management can get a full picture of how the business is performing at any given moment which can help with major business decision making.

22.9 The Influence of Information Technology in Accounting Profession/Environment

Computers, servers, the Internet, wireless and personal digital devices have forever transformed the way companies conduct business. Software packages have also improved traditional operations and production processes. Accounting has seen tremendous advancements thanks to the growth of information technology. Accounting software automates the traditional paper ledgers and accounting books. These software packages may come with a variety of specialised features or a generic program that can be customised to current business operations. Companies usually choose accounting programs based on the size of their operations and the number of users accessing the system. Large companies may choose system-wide software packages, such as an enterprise resource planning system. Information technology (IT) has created significant benefits for accounting departments. IT networks and computer systems have shortened the lead time needed by accountants to prepare and present financial information to management and stakeholders. Not only has IT shortened the lead time required to present financial information, but it also has improved the overall efficiency and accuracy of the information.

22.10 Computerised Accounting Systems

The biggest impact of IT has made on accounting is the ability of companies to develop and use computerised systems to track and record financial transactions. Paper ledgers, manual spreadsheets and hand-written financial statements have all been translated into computer systems that can quickly present individual transactions into financial reports. Most of the popular accounting systems can also be tailored to specific industries or companies. This allows companies to create individual reports quickly and easily for management decision making.

22.11 Software Tools in the Accounting Process

Up-to date accountants must be familiar with the software tools to help them perform the accounting functions more effectively and efficiently. Accounting software contains the basic accounting functions such as input, processing and output. There are two classifications of accounting software as low-end and high-end. Low-end is all-in-one software, which means all of the functions of accounting system are performed within one software. Therefore, low-end software is used for small companies. Income tax: Because tax laws are frequently changing, it is becoming exceedingly difficult to deal with them. Therefore, manual tax preparation is becoming more and

22.12 The Factors Limiting the Use of Computer Technology in the Field of Accounting.

1. **Accounting Changes through the Ages:** We can start way back in the beginning with the invention of the abacus, used to keep track of calculations in business. Although we didn't call it technology, we can go back centuries with several attempts to build adding machines to help an accountant with mathematical solutions. After the first working adding machine, came the invention of the calculator for information accuracy. As technology advanced so did the speed and proficiency of the accountant's job. But even with adding machines and calculators the accountant still had to keep track of the businesses' functions with paper entry. The process of identifying, measuring, and communicating financial information was documented in the form of paper records, columns of numbers and handwritten statements. An accountant had to be a very methodical, detail-oriented person.
2. **Risk of Failure Information Technology**: The numerous stumbling blocks that organisations face is primarily due to inadequate investment in ongoing training for involved personnel, as well as lack of corporate policy protecting the integrity of the data in the systems. Some other reasons for failure are as follows: Limited options for customisation of the system available. System may be over engineered when compared to the actual requirements. Technological obsolescence.
3. **IT Is Also Killing the Jobs and Only Technology Can Save Them**: The only way to fight [job losses] is to train the talent that we have. Because in the future, we have to embrace robotics. It allows us to reduce cost. If we reduce cost, we have more money that we can use for innovation. The more money we have, the more new products we can create. The more products we create, the more workforce we can hired.

22.13 Accounting Data and Other Business Information to Make Informed Decision.

Even the smallest business has more accounting data than it can shake a stick at. Nearly every transaction a business makes is recorded in the financial records of the company. This information can be quite powerful in the right hands. Understanding some of the ways accounting data is used to make business decisions can help you use the information you already have to make your business even better.

1. **Business Planning**: One of the most common uses of accounting information is to create budgets and forecasts for business planning. In many organisations, the budget process is a staple of annual planning. By incorporating accounting data from prior years, budget preparers have a figure to start from when projecting sales and expense amounts for the upcoming year.
2. **Business Analysis**: Accounting data is not only used to predict performance in future periods, but this information is also used to analyse business performance after the fact. Many small business owners review accounting information on a monthly basis by comparing actual sales, expense and profit performance to projected performance. If there are substantial variances in projected versus actual performance, small-business owners can implement changes in the organisation to correct for these differences.
3. **Investment Choices**: When a company has an excess of cash, such as when receiving the proceeds of a loan or a disbursement from an investor, company management often uses accounting data to determine how to invest these funds. By examining the company's cash projections, management can determine how much cash is needed in the short term and how much will be needed in the long term.
4. **Benchmarking**: Comparison of financial performance to internal budgets isn't the only way that small business owners use accounting information to gauge performance. Benchmarking, the process of comparing company financial information to industry or other company financial data, allows managers to evaluate company performance relative to peers. While benchmarking can be useful, small-business owners should be careful. Often comparison companies are large publicly traded corporations. These companies might not always be the best comparison group. Management should take theses analyses with a grain of salt.

22.14 Kinds of Accounting Software

a. **<u>NetSuite ERP:</u>** This essentially a customer relationship management (CRM) solution, but the platform can be used for sales and marketing automation, as well as order management and customer support. It offers a myriad of tools and features to make financial management simple. Standard features include pre-configured dashboards that can be customised by users for their specific needs. NetSuite ERP also offers robust automation and scalability features. It can grow with your company and automate processes such as financial management, order management, revenue management, fixed assets, inventory management, and billing.

b. **Paychex**: This provides payroll solutions to SMBs and large enterprises. For small businesses, Paychex offers a free mobile application where you can easily run your payroll with a couple of clicks or with the help of Paychex Voice Assist for a hands-free experience. Employees can also use the mobile application where they can utilise self-service tools to access payslips, update their bank information and tax details, and more.

c. **Gusto**: It is an all-in-one accounting and HR platform that allows you to automate basic to more advanced payroll tasks. Built specifically for accountants, the solution has clear and detailed financial reporting features to help businesses see exactly where their money goes. With its accounting dashboards, Gusto also provides real-time analytics that business owners can turn to when they need immediate information about their financial records.

d. **QuickBooks Online**: It is an accounting solution for small businesses, freelancers, and independent accounting firms. This cloud-based application combines all essential accounting tools in a single platform to help small businesses streamline accounting and financial management tasks. Among its features are automated tax calculations, expense tracking, invoice management, balance sheet reporting, bill management, sales monitoring, and more. QuickBooks Online supports multiple devices and is equipped with auto-syncing options so your data will be up to date no matter what device you are using.

e. **Tipalti Approve:** This is a cloud payment automation and management software that helps simplify global mass payments. This makes the software suitable for companies with offices worldwide. Notably, you can accept payments in more than 190 countries, use 120 currency options, and rely on six payment methods, including PayPal, wire, local bank transfer, and debit cards.

f. **Fresh Book**s: This is being used by more than five million users around the world to streamline time tracking and invoicing. The vendor has recently updated the product to allow for easy collaboration between team members and has added a redesigned dashboard where you can prioritise tasks and manage payments. The classic features have not changed, and Fresh Books continues to offer top-rate invoice-to-payment functionalities, including direct payment gateways, overdue payment reminders, delay fees, and payment claims.

g. **Avid Exchange:** This is a comprehensive invoice management and payment automation system built for businesses of all sizes. It is equipped with features for paperless invoicing, purchase order automation, as well as payment processing to help you streamline accounting operations. It also comes with a highly configurable interface and intelligent approval workflows to boost efficiency and reinforce visibility across your accounts payable processes. In addition, the platform has search and filter tools that make it easy to track invoices as well as review transactions.

h. **Rossum**: This is also a powerful cloud-based platform designed to streamline account payable processes from importing documents, collecting and capturing data, and purchase order matching, to invoice processing. This software's system is powered by a self-learning AI engine that automates various critical processes, thus reducing manual efforts and human error.

i. **A2X**: This promotes accurate bookkeeping by directing transactional data from sales channels like Amazon and Shopify to your accounting platform. Gone are the days of manually recording sales transactions and using spreadsheets for financial statements. Your financial details are transferred seamlessly into your books as it integrates with esteemed accounting solutions, such as Xero and QuickBooks. A2X gives you complete visibility into your cash flow by correctly classifying each transaction and summing up your sales and expenses. Your fees, refunds, and other necessary expenses are also accounted for.

22.15 Data Processing Technique and Method

Data Processing (DP) refers to the extraction of information through organizing, indexing and manipulating data. Information here means valuable relationships and patterns that can help solve problems of interest. In history, the capability and efficiency of DP have been improving with the advancement of technology. Processing involving intensive human labour has been gradually replaced by machines and computers. The methods of DP refer to the techniques and algorithms used for extracting information from data. For example, processing of facial recognition data needs classification, and processing of climate data requires time series analysis.

The results of DP, i.e., the information extracted, also depends largely on data quality. Data quality problems like missing values and duplications can be solved through various methods, but some systematic issues like equipment design error and data collection bias are harder to overcome at this stage. With the advancement of technology, the history of DP can be divided into three stages: Manual DP, Mechanical DP and Electronic DP. The goal is to finally use Electronic DP to replace the other two to reduce error and improve efficiency.

iv. Manual DP is to process data with little or no aid from machines. Before the stage of Mechanical DP, only small-scale DP could be done, and they were very slow and could easily bring in errors. Having said that, Manuel DP still exists at present, and it is usually because the data are hard to digitise or not machine readable, like in the case of retrieving sophisticated information from old books or records.

v. Mechanical DP is to process data with help from mechanical devices (not modern computers). This stage started in 1890 (Bohme et al., 1991). During that year, the U.S. Bureau of the Census installed a system consists of complicated punch card machines to help tabulate the results of a recent national census of population. All data are organised, indexed and classified. Searching and computing are made easier and faster than manual work with the punch card system.

vi. Electronic DP is to process data using computer and other advanced electronic devices. Nowadays, Electronic DP is the most common method and is still quickly evolving. It is 2 widely seen in online banking, e-commerce, scientific computing, and other activities. Electronic DP provides best accuracy and speed. Without specification, all DP discussed in later sections are Electronic DP.

Methods

The methods of DP here refer to the techniques and algorithms used for extracting information from data, which vary a lot with the information of interest and data types. One definition for data is “Data are encodings that represent the qualitative or quantitative attributes of a variable or set of variables” (Fox, 2018). The categorical type of data can represent qualitative attributes, like the eye colour, gender and jobs of a person; and the quantitative attributes can be represented by numerical type of data, like the weight, height and salary of a person. Based on data types and patterns of interest, we can choose from several DP methods (Fox, 2018), such as:

vii. Classification is a method that uses a classifier to put unclassified data into existing categories. The classifier is trained using categorised data labelled by experts, so it is one type of supervised learning in the machine learning terminology. Classification works well with categorical data.

viii. Regression is a method to study the relationship between a dependent variable and other independent variables. The relationship can be used for predicting future results. Regression usually uses numerical data.

ix. Clustering is a method to find distinct groups of data based on their characteristics. Social media companies usually use it to identify people with similar interests. It is a type of unsupervised learning and works with both qualitative and quantitative data.

x. Association Rule Mining is a method to find relationships between variables such as "which things or events occur together frequently in the dataset?." This method was initially developed to do market basket analysis. Researchers in mineralogy apply association rule mining to use one mineral as the indicator of other minerals.

xi. Outlier Analysis, also called anomaly detection, is a method to find data items that are different from the majority of the data.

xii. Time Series Analysis is a set of methods to detect trends and patterns from the time series data. Time series data are a set of data indexed with time, and this type of data are used in many different domains.

DP methods are a key part for generating information, and the above-mentioned ones are just a partial list. Data quality is another thing that can influence the results of DP.

Data Quality Thota (2018) defined data quality as "the extent to which some data successfully serve the purposes of the user". In the case of DP, this purpose is to get correct information, which involves two levels of data quality. Level one is the issues in data themselves such as missing values, duplications, inconsistency among data and so on. Level two is accuracy, which is the distance between data and real values. Usually, level one quality problems are easier to solve compared to the level two.

Level one issues can be discovered through exploratory inspection and visualisation tools, and the issues can be solved accordingly.

xiii. Missing data: direct solution is to go back and gather more information. If that is not possible, common solution is to use domain knowledge or existing algorithms to impute them based on correlations between different attributes.

xiv. Duplications: we can index the data based on certain attributes to find out duplications and remove them accordingly.

xv. Inconsistency: check the metadata to see the reason for inconsistency. Metadata are supplementary descriptive information about the data. Common issues are inconsistent data units and formats, which can be converted accordingly.

xvi. Outliers: if they are proven to be errors, we can make corrections. In other cases, outlier data should still be included.

Level two issues are usually originated from equipment design error and/or data collection bias, in which case data are uniformly off the true values. This makes level two issues harder to be seen in data validation. They can possibly be seen when domain experts check the results.

Data Processing for Big Data

Big data are big in three aspects: volume, velocity and variety (Hurwitz et al., 2013). Variety has been discussed in data quality section. Now we need to have a model capable of storing and processing high volume of data at relatively fast speed, and/or to deal with fast and continuous high-speed incoming data in a short response time.

Batch Processing works with extremely large static data. In this case, there is no new data coming in during processing, and data usually stores in more than one device. The large dataset is grouped into smaller batches and processed respectively, with results combined later. The processing time is relatively long, so this model is not suitable for real-time tasks.

Stream Processing, in contrast to batch processing, applies to dynamic and continuous data (new data keeps coming in). This model usually works for tasks that require short response time. For example, hotel and airline reservation systems needs to provide instant feedback to customers.

Theoretically, this model can handle unlimited amount of data as long as the system has enough capacity. Mixed processing could process both batch and stream data.

Big Data Processing Frameworks

A framework in computer science is a special library of generic programs, which can

perform specific tasks after adding some codes for actually functionality. Widely used frameworks are usually well written and tested. Simple python scripts can take care of small datasets, but for big data systems, "…processing frameworks and processing engines are responsible for computing over data in a data system" (Ellingwood, 2016). This section will cover five popular open-source big data processing frameworks from Apache.

1. **Apache Hadoop:** As a well-tested batch-processing framework, Apache Hadoop was first developed by Yahoo to build a "search engine" to compete with Google. Later Yahoo found its great potential in DP. Hadoop's cross-system compatibility, distributed system architecture and open-source policy made it popular with developers. Hadoop can easily 4 scale up from one individual machine (for testing and debugging) up to data severs with large number of nodes (for large scale computing). Due to its distributed architecture, a high-workload system can be extended by adding new nodes, and batch process can be made more efficient through parallel computing (Ellingwood, 2016). Major components of Hadoop are:
    a. Hadoop Distributed File System (HDFS): HDFS is the underlying file managing and coordinating system that ensures efficient data file communication across all nodes.
    b. Yet Another Resource Negotiator (YARN): YARN is the manager to schedule tasks and manage system resources.
    c. MapReduce: MapReduce is the programming model taking advantage of "divide and conquer" algorithm to speed up DP.
2. **Apache Storm:** Apache Storm is a stream processing framework suitable for highly responsive DP. In a stream processing scenario, data coming in the system are continuous and unbounded. To achieve the goal of delivering results in nearly real-time, Storm will divide the incoming data stream into small and discrete units (smaller than batch)

for processing. These discrete steps are called bolts. Native Storm does not keep operations on bolts in order, which has to be solved by adding extra modules like Trident (Ellingwood, 2016). The bottom line is, Storm is highly efficient and supports multi-programming languages, so it is suitable for low-latency stream processing tasks.

3. **Apache Samza**: "Apache Samza is a stream processing framework that is tightly tied to the Apache Kafka messaging system." (Ellingwood, 2016). Apache Kafka is a distributed streaming platform that process streams in the order of occurrence time and keep an immutable log. Hence Samza can natively overcome the ordering problem in Storm and enable real-time collaboration on DP between multiple teams or applications in big organisations. However, compared to Storm, Samza has higher latency and less flexibility in programming language (only support Java and Scala).
4. **Apache Spark:** Apache Spark is the next generation framework that combines batch and stream processing capabilities. Compared to Hadoop MapReduce, Spark processes data much faster due to its optimisation on in-memory processing and task scheduling. Furthermore, the deployment of Spark is more flexible – it can run individually on a single system or replace the MapReduce engine and incorporate into a Hadoop system. Beyond that, Spark programs are easier to write because of an ecosystem of existing libraries. It generally does a better job in batch processing than Hadoop, however, it might not fit for extremely low latency stream processing tasks. Also, devices using Spark needs to install larger RAM, which increases costs. Spark is a versatile framework that fits diverse processing workloads.
5. **Apache Flink**: Apache Flink framework handles both stream and batch processing workloads. It simply treats batch tasks as bounded stream data. This stream-only approach offers Flink fast processing speed and real in order processing. It is probably the best choice for organisations with strong needs for stream processing and some needs.

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The results of DP, i.e., the information extracted, also depends largely on data quality. Data quality problems like missing values and duplications can be solved through various methods, but some systematic issues like equipment design error and data collection bias are harder to overcome at this stage. All these aspects influencing DP will be covered in later sections, but let's look at the history of DP first.

22.15.1 History of Data Processing

With the advancement of technology, the history of DP can be divided into three stages: Manual DP, Mechanical DP and Electronic DP. The goal is to finally use Electronic DP to replace the other two to reduce error and improve efficiency.

a. **Manual Data Processing:** It is to process data with little or no aid from machines. Before the stage of Mechanical DP, only small-scale DP could be done, and they were very slow and could easily bring in errors. Having said that, Manuel DP still exists at present, and it is usually because the data are hard to digitise or not machine readable, like in the case of retrieving sophisticated information from old books or records.
b. **Mechanical Data Processing**: This refers to process data with help from mechanical devices (not modern computers). This stage started in 1890 (Bohme et al., 1991). During that year, the U.S. Bureau of the Census installed a system consists of complicated punch card machines to help tabulate the results of a recent national census of population. All data are organised, indexed and classified. Searching and computing are made easier and faster than manual work with the punch card system.
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The categorical type of data can represent qualitative attributes, like the eye colour, gender and jobs of a person; and the quantitative attributes can be represented by numerical type of data, like the weight, height and salary of a person. Based on data types and patterns of interest, we can choose from several DP methods (Fox, 2018), such as:

i. **Classification**: is a method that uses a classifier to put unclassified data into existing categories. The classifier is trained using categorised data labelled by experts, so it is one type of supervised learning in the machine learning terminology. Classification works well with categorical data.

ii. **Regression**: It is a method to study the relationship between a dependent variable and other independent variables. The relationship can be used for predicting future results. Regression usually uses numerical data.

iii. **Clustering**: It is a method to find distinct groups of data based on their characteristics. Social media companies usually use it to identify people with similar interests. It is a type of unsupervised learning and works with both qualitative and quantitative data.

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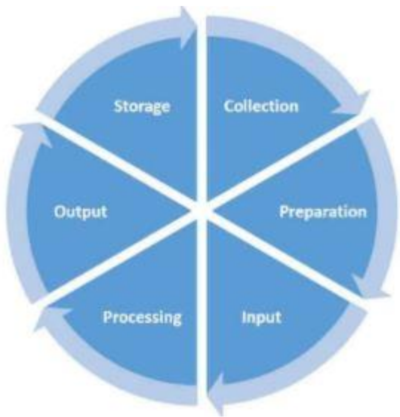
v. **Outlier Analysis**: it is also called anomaly detection, is a method to find data items that are different from the majority of the data.

vi. **Time Series Analysis**: It is a set of methods to detect trends and patterns from the time series data. Time series data are a set of data indexed with time, and this type of data are used in many different domains. DP methods are a key part for generating information, and the above-mentioned ones are just a partial list. Data quality is another thing that can influence the results of DP.

22.15.3 Steps in The Data Processing Cycle:

Generally, there are six main steps in the data processing cycle:



Step 1: Collection

The collection of raw data is the first step of the data processing cycle. The type of raw data collected has a huge impact on the output produced. Hence, raw data should be gathered from defined and accurate sources so that the subsequent findings are valid and usable. Raw data can include monetary figures, website cookies, profit/loss statements of a company, user behaviour, etc.

Step 2: Preparation

Data preparation or data cleaning is the process of sorting and filtering the raw data to remove unnecessary and inaccurate data. Raw data is checked for errors, duplication, miscalculations or missing data, and transformed into a suitable form for further analysis and processing. This is done to ensure that only the highest quality data is fed into the processing unit.

Step 3: Input

In this step, the raw data is converted into machine readable form and fed into the processing unit. This can be in the form of data entry through a keyboard, scanner or any other input source.

Step 4: Data Processing

In this step, the raw data is subjected to various data processing methods using machine learning and artificial intelligence algorithms to generate a desirable output. This step may vary slightly from process to process depending on the source of data being processed (data lakes, online databases, connected devices, etc.) and the intended use of the output.

Step 5: Output

The data is finally transmitted and displayed to the user in a readable form like graphs, tables, vector files, audio, video, documents, etc. This output can be stored and further processed in the next data processing cycle.

Step 6: Storage

The last step of the data processing cycle is storage, where data and metadata are stored for further use. This allows for quick access and retrieval of information whenever needed, and also allows it to be used as input in the next data processing cycle directly.

22.15.4 Types of Data Processing

There are different types of data processing based on the source of data and the steps taken by the processing unit to generate an output. There is no one-size-fits-all method that can be used for processing raw data.

a. **Batch Processing**: Data is collected and processed in batches. Used for large amounts of data. E.g.: payroll system.
b. **Real-time Processing**: Data is processed within seconds when the input is given. Used for small amounts of data. E.g.: withdrawing money from ATM.
c. **Online Processing:** Data is automatically fed into the CPU as soon as it becomes available. Used for continuous processing of data. E.g.: barcode scanning.
d. **Multiprocessing:** Data is broken down into frames and processed using two or more CPUs within a single computer system. Also known as parallel processing. E.g.: weather forecasting.
e. **Time-sharing:** Allocates computer resources and data in time slots to several users simultaneously.

22.15.5 Examples of Data Processing

Data processing occurs in our daily lives whether we may be aware of it or not. Here are some real-life examples of data processing:

a. A stock trading software that converts millions of stock data into a simple graph
b. An e-commerce company uses the search history of customers to recommend similar products
c. A digital marketing company uses demographic data of people to strategise location-specific campaigns
d. A self-driving car uses real-time data from sensors to detect if there are pedestrians and other cars on the road.

22.15.6 Moving from Data Processing to Analytics

If we had to pick one thing that stands out at the most significant game-changer in today's business world, it's big data. Although it involves handling a staggering amount of information, the rewards are undeniable. That's why companies that want to stay competitive in the 21st-century marketplace need an effective data processing strategy.

Analytics, the process of finding, interpreting, and communicating meaningful patterns in data, is the next logical step after data processing. Whereas data processing changes data from one form to another, analytics takes those newly processed forms and makes sense of them. But no matter which of these processes data scientists are using, the sheer volume of data and the analysis of its processed forms require greater storage and access capabilities, which leads us to the next section!

Data Quality

Thota (2018) defined data quality as "the extent to which some data successfully serve the purposes of the user". In the case of DP, this purpose is to get correct information, which involves two levels of data quality. Level one is the issues in data themselves such as missing values, duplications, inconsistency among data and so on. Level two is accuracy, which is the distance between data and real values. Usually, level one quality problems are easier to solve compared to the level two. Level one issues can be discovered through exploratory inspection and visualisation tools, and the issues can be solved accordingly.

i. Missing data: direct solution is to go back and gather more information. If that is not possible, common solution is to use domain knowledge or existing algorithms to impute them based on correlations between different attributes.
ii. Duplications: we can index the data based on certain attributes to find out duplications and remove them accordingly.
iii. Inconsistency: check the metadata to see the reason for inconsistency. Metadata are supplementary descriptive information about the data. Common issues are inconsistent data units and formats, which can be converted accordingly.
iv. Outliers: if they are proven to be errors, we can make corrections. In other cases, outlier data should still be included. Level two issues are usually originated from equipment design error and/or data collection bias, in which case data are uniformly off the true values. This makes level two issues harder to be seen in data validation. They can possibly be seen when domain experts check the results.

The Future of Data Processing

The future of data processing can best be summed up in one short phrase: cloud computing. While the six steps of data processing remain immutable, cloud technology has provided spectacular advances in data processing technology that has given data analysts and scientists the fastest, most advanced, cost-effective, and most efficient data processing methods today. The cloud lets companies blend their platforms into one centralised system that's easy to work with and adapt. Cloud technology allows seamless integration of new upgrades and updates to legacy systems while offering organisations immense scalability.

Cloud platforms are also affordable and serve as a great equaliser between large organisations and smaller companies. So, the same IT innovations that created big data and its associated challenges have also provided the solution. The cloud can handle the huge workloads that are characteristic of big data operations.

Revision Questions

Multiple Choice Questions

1. Reports produced by a Management Information System (MIS) only when there is deviation from a normal standard is described as …………………reports.
   (a)routine (b)ad-hoc (c)periodic (d)exception
2. The three functional units of a modern computer are ……………………… units.
   a. basic, COBOL and output
   b. black box, output and input
   c. input, processor and output
   d. processor, FORTRAN and output
3. What is the full meaning of the acronym EFTPOS?
   a. Electronic Fund Transfer to Point of Sale
   b. Electronic Fund Transfer on Point of Sale
   c. Electronic Fund Transfer for Point of Sale
   d. Electronic Fund Transfer at Point of Sale
4. Microsoft PowerPoint is an example of a ……………………. package.
   a. graphical
   b. spreadsheet
   c. presentation
   d. word processing
5. Which of the following is NOT a means of making electronic transfer of money?
   a. Standing order
   b. Electronic Fund Transfer
   c. Automated Teller Machine
   d. Electronic Fund Transfer at Point of Sales
6. Related data/information stored in a computer-based accounting system which can be arranged into any desired format is ....
   a. database
   b. soft copy
   c. electronic system

    d. information technology

7. A set of programs that form a complete system for a particular application which are ready made programs written in a standardised way and common to many users is called ……. packages
    a. software
    b. B application
    c. operating
    d. computer
8. The process of ascertaining that the data has been entered accurately from the source document into the information system is called data------------
    a. collection
    b. sorting
    c. verification
    d. recording
9. Data processing is the term given to the process of collecting all items of data together and transforming them to produce------------------
    a. output
    b. input
    c. information
    d. document
10. In relation to electronic commerce, briefly describe the process of Electronic Data Interchange. A business………………….
    a. exchanges computer readable data in a standard format for another business.
    b. exchanges computer readable data in a standard format from another business.
    c. interchange computer readable data in a standard format with another business.
    d. business transmits computer readable data in a standard format to another business.

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
D	C	D	C	A	A	B	C	C	D

Theory Questions

1.
    a. What is information Technology in Accounting?
    b. Enumerate the method of accounting information technology?
    c. Explain two reasons why accounting is important for business.
2.
    a. Explain the three fundamental benefits of information technology to accounting information systems.
    b. Describe how technology has influenced the accounting field.
3. Discuss three to five advantages and disadvantages of implementing an IT-based accounting system
4. Explain two concepts in Managerial accounting that provides the most value. Indicate how these two new areas of knowledge will benefit a career in Information Technology.
5.
    a. Technology is increasingly used to process accounting data. Why, then, must we study and understand accounting?
    b. Identify and discuss at least 3 reasons why accounting information systems (AIS) is an important area of study for future accountants.

SECTION B

CHAPTER ONE

INTRODUCTION TO COST ACCOUNTING

1.1 Learning Objectives

At the end of this chapter, the readers are expected to know and understand;

i. The meaning and objectives cost accounting
ii. Purposes of cost accounting
iii. Responsibility centres
iv. Various professionals' views on cost accounting
v. Relevance usage and importance of cost accounting

1.2 Introduction

Cost can be defined in many ways. Generally, cost may be defined as "the value of economic resources" used in the production of goods and services. The art of determining the "economic resources used in the production process" is called Costing or Cost Accounting.

1.3 Cost Accounting

This is a management information system that assists management in analysing costing information for the purpose of planning, controlling and decision making.

CIMA defines Cost Accounting as the "establishment of budgets, standard costs and actual costs of operation, activities or products and the analysis of variances, profitability or the social use of funds.

It is important to note that in modern management of accounting information, it is become more and more difficult to draw a clear-cut line between financial accounting, cost accounting and management accounting. For example, a sound knowledge of costing is a vital tool for financial accountants to prepare financial statements for both internal and external users. In the area of taxation and auditing, the knowledge of costing is indispensable for the tax officials to understand the cost basis for arriving at taxable figures. The auditor on his side should be knowledgeable in costing to enable him to form a reasonable opinion of the transactions he is auditing or investigating.

Basic knowledge of costing is very essential to other allied professionals. For example, marketing directors, production engineers, executive directors etc need to have knowledge of costing so as to appreciate financial report upon which decisions are made.

1.4 Objectives of Cost Accounting

The objective of cost accounting is to provide relevant cost data to enable management carry out its function creditably. Cost information is applied in the number of ways to achieve the goals of an organisation.

a. Planning - Cost data is a vital instrument for planning, budgeting and forecasts for future operations. Both tactical and strategic plans are developed from cost information and the plans serve as guide to achieve the organisational short term and long-term objectives.
b. **Control** - The budget/estimates prepared based on cost, are closely monitored to ensure that they are adhered to as much as possible. Any deviation from plan is quickly clenched and brought back on course. This action by management to ensure that actual performance confirm as much as possible with the plans or estimates is called control.
c. **Evaluation** - In this case the state of operation is looked into by analysing the cost data. Data analysed and accumulated are used to prepare operating profit or loss in a period for the entire organisation or separate units of the organisation.
d. **Decision Making** - Cost data are analysed from time to time to decide an alternative courses of action. The planning, controlling and evaluating functions involve decision making at all stages.
   Decision making is the consideration of various available options open to management and selecting the one that give the best cost benefit.

1.5 Uses of Cost Accounting Information

Cost information is primarily designed for internal management uses. The cost data provided are used by the management for different purposes.

1. Cost per unit or total cost of production, is used by management for pricing decision production planning and control.

2. Cost of running a section or department is used for planning and controlling the department and evaluating the section or departmental needs.
3. Material, Labour and Overhead Costs are used to control purchasing department, materials usage, and efficiency of Labour, Wage rates, overhead allocation, overhead apportionment and overhead absorption rates.
4. Cost of scraps and rectification of defective goods are used to determine the efficiency of production personnel, unit and total cost of production and material usage.
5. To facilitate the preparation of feasibility studies of new projects by bringing out the elements of costs that will go into different budgets.
6. To assist in setting standards of performance and to provide feedback information for control purposes.
7. It assists in identifying the area of wastages and enable the management to avoid it.
8. It helps to set budget i.e., looking into the future and quantifying it financially.
9. To help in determining cost and profits during a given accounting period.
10. It helps to establish method of controlling cost.
11. It assists in getting the prices so as to cover costs and generate an acceptable level of profit.

1.6 Quality of Good Cost Accounting Information

Cost information is primarily designed for internal management uses. The cost data provided are used by management for different purposes. The information to be provided should possess the following features.

i. The information should be relevant to the user
ii. The purpose for which the information is intended must be clearly stated
iii. The information should be simple, clear, brief and concise for easy understanding.
iv. The information should be sufficient, accurate and reliable
v. The information should consider controllable matters only,
vi. The information should be timely supplied for the purpose for which it is required.

1.7 Steps Involved in the Installation of Cost Accounting System

1. Ascertain the object of management in installing the system
2. Ascertain management needs for information

3. Ascertain/understand the technical features of the class of the industry concerned
4. Study the expected individual characteristics of the company:
    - The stages through which the product must pass before it is completed
    - The nature of the products
    - The layout of the factory
    - Nature of the materials to be used and method of storage
    - The method of remunerating labour
    - The personality of the key personnel and the capabilities of the staff generally viz collection of information.
5. Select a suitable costing method
6. Design suitable forms to collect cost data
7. Design the cost codes
8. Training of client's employees if need arises
9. Prepare a cost office manual to guide the costing staff in operating the system.

1.8 Cost Data and Price Determination

Costing knowledge is essential in price determination. Pricing strictly speaking is in the field of marketing, but the marketers are always expected to have some knowledge of costing to assist them in fixing the prices, through under monopolistic condition, the producer fixes very high prices without regard to cost. It is necessary to note that only very few organisations have the privilege of monopolistic status.

In different types of pricing, cost information is always a tool for operating in a competitive market.

1.9 Differences between Cost Accounting and Financial Accounting

Though the development of integral accounting has bridged and reconciled the two sets of accounting information, the objectives pursued by the two branches of accounting are still evident in practice in the folio wing areas.

	Characteristic	Financial Accounting	Cost Accounting
1	Target Users	Both Internal and External Users	Exclusively for internal users i.e., Management

2	Legal Requirement	Tax laws, company laws and statutory regulators make it mandatory that financial accounting must be prepared at the end of Every financial year.	Cost accounting is optional and will only be prepared when management request for it.
3	Rules and Regulations	Preparation of financial accounting must comply with the requirement of CAMA and in addition with various accounting standards	Preparation of cost accounting is not governed by any law or standard. It only prepared when it needed by management.
4	Degree of Details	Financial accounting focuses attention on the entire organisation	Cost accounting focuses attention mainly on various functions within the organisation.
5	Frequency of Reports	Financial accounting reports are usually prepared annually using specified format	Cost accounting information may be generated monthly, quarterly to various management levels using different formats.
6	Unit of Measurement	Financial accounting reports uses monetary units for measurement of various transactions and result e.g., gross profit, net profit etc	Cost accounting uses both monetary and non-monetary units of measurement e.g., tons of material, hours worked and price, etc.
7	Time Focus	Financial accounting reports are historical in Nature	Cost accounting reports are futuristic and predictive in nature.
8	Objective	Report is stewardship	Reports are used for planning, controlling and decision making.
9	Inter-disciplinary	Reports are prepared strictly line with accounting standards and regulations	Reports relates to other disciplines such as economics, quantitative techniques, production management, etc.
10	Taxation	Report is prepared for taxation purpose	Report is not prepared for taxation purpose.
11	Report is not prepared for taxation purpose.	Approximation and Estimation Financial Accounting report do not permit to approximate and estimate	Cost accounting report do allow approximate and estimate.

1.10 Scope of Cost Accounting

Cost accounting system in any organisation is the foundation of the internal financial information system. As discussed earlier, management need a variety of information to plan, control and make decision.

Information regarding the financial aspect of performance is provided by a typical costing and uses are provided below:

Information provided by Costing System	Possible Uses by Management
• Cost per unit production or services or a process	A factor of pricing decision production planning and cost Control.
• Cost of running a cost centre of factory	Organisational planning
• Wages cost per unit or per period	Production planning decision on alternative method and wages cost control
• Scrap or Rectification Cost	Material cost control production Planning
• Cost behaviour	Profit planning, make or buy decision, cost control.

In modern day business world, cost accounting is applicable to both manufacturing and non-manufacturing activities, wholesale and retail business, educational institutions, transport service and so on.

Below are examples of cost analysis related to non-manufacturing sectors.

i. Cost per patient night is used in hospitals and clinics for cost ascertainment and budgetary control
ii. Cost per passenger kilometre is used in transport undertakings for cost ascertainment and cost control purposes.
iii. Cost accounting system provides operating statement of department efficiency and profitability. Stock turnover and efficiency ratio to departmental store.
iv. Bank uses costing system for branch operating statement
v. For farmers, cost accounting system can be importance in the area of crop or field operating statements and decision-making information e.g., utilizing marginal costing system on whether to accept or reject a farm or crop.
vi. Cost per full-time or part-time students is used by Polytechnics, Universities and Colleges for cost ascertainment and cost control purpose.

1.11 Definition of Costing Terminology

i. **Cost** - It is the value of economic resources used as a result of producing or doing a thing costed.

ii. **Cost Unit** - It is a unit of quantity of product, service time or a combination of these in relation to which costs are expressed or ascertained

iii. **Cost Centre** - It is a location, an item of equipment or an individual person for which cost may be ascertained and used for the purpose of cost control.

iv. **Profit Centre** - It is any sub-unit of an organisation to which both revenues and costs are assigned, so that the responsibility of a sub-unit may be measured.

v. **Investment Centre** - It is a segment of the organisation where costs are incurred, revenue generated and in which assets employed are also measured.

vi. **Imputed Cost** - It is a cost which does not involve actual cash outlay, which is used only for the purpose of decision making and performance evaluation, vii. Committed Cost - It is a cost that is primarily associated with maintaining the organisation’s legal and physical existence over which management has little discretion, viii. Production Centre - It is cost centre within an organisation that produce what the firm is established for. ix.

vii. **Period Cost** - It is the cost that tends root to be unaffected by changes

viii. in level of activity during a given period of time

ix. **Sunk Cost** - It is the cost that has been invested in a project and which will not be recovered if the projects are terminated. It is theexpenditure which has taken place in the past and is not affected by a particular decision under consideration.

x. **Notional Cost** - This is a hypothetical cost taken into account in a particular situation to represent the benefit enjoyed by an entity in respect of which no actual expenses are incurred.

xi. **Shutdown Cost** - It is cost incurred in relation to the temporary closing of a department or an entity such cost includes those of closing as well as those of re-opening.

Revision Questions

Multiple Choice Questions

1. A cost driver is
   a. an item of production overhead
   b. an activity which generates cost
   c. the cost of operating a department
   d. a common cost which is shared over cost centre
   e. any cost relating to transport
2. Which of the following is not one of the problems with activity-based costing?
   a. the cost of cost driver
   b. the assumption of a driver, linear relationship between the usage of a cost driver and the amount of overhead
   c. the production of common cost
   d. the ability to recognise activities which cause cost
   e. complexity
3. Which of the following costs are likely to be controllable by Head of the Production Department?
   a. price paid for materials
   b. change for floor space
   c. raw materials used
   d. machinery depreciation
   e. insurance on machinery
4. Which of the following activities and possible cost drivers is incorrect?
   a. customer order processing number of order
   b. production control number of engineering change
   c. inventory control number deliveries
   d. engineering support number of inspections
   e. number of supplies and customer's frequency of deliveries
5. Direct costs
   a. vary per unit of output as production changes

b. are constant in total when production varies
c. vary in total when production is fixed
d. are fixed per unit of production in the long run
e. are constant per unit of output

6. Historical costing is
    a. amount of expenditure incurred on or attributable to a given thing
    b. the allotment of proportions of cost centres or cost units
    c. the ascertainment of costs after they have been incurred
    d. the practice of charging all direct costs to operations
    e. The practice of removing depreciation from costs of assets
7. Which of the following is not a functional classification of cost?
    a. production cost
    b. semi-fixed cost
    c. administration cost
    d. selling and distribution cost
    e. research and development cost
8. Which cost arises from direct consequence of a decision?
    a. direct labour cost
    b. opportunity cost
    c. differential cost
    d. relevant cost
    e. incremental cost
9. Sunk costs comprise all of the items listed below except
    a. book values of an existing fixed asset
    b. cost of new plant to be purchased
    c. assets with no realizable
    d. cost of a resource acquired in the past
    e. depreciation of old machines purchased
10. Production control is responsible for all the following except
    a. planning
    b. control

c. stores department
d. rate fixing and time study
e. direct labour cost

CHAPTER TWO

CLASSIFICATION OF COSTS

2.1 Learning Objectives

At the end of this chapter, the students are expected to know and understand:

i. The meaning and purpose of cost;
ii. Various methods of classifying cost and their objectives; and
iii. Methods of segregation of cost.

2.2 Introduction

Cost Accounting like other management sciences has principles or concepts that guide the preparation of cost statement or information. Such rules though not statutory in nature are generally accepted and applied in the preparation of cost information.

2.3 The Rules of Cost Accounting

The rules include the following:

i. All cost should be charged to the function, sections or products that caused them, for example, the salary of production Engineer should be charged to production department and not to marketing department.
ii. No cost should be charged until it is incurred. For example, distribution cost should not be charged on products that are still in the store. It is only proper to charge such costs to the products when they have been transported to various warehouse or customers.
iii. Costs or losses incurred in the past should not be charged to current or future operations. The exception to this rule is accepted when there is evidence that the present or future operations benefit from the past cost. For example, if the cost of advertising in the past was capitalised, a part of the cost may be charged to current or future marketing cost.
iv. Any cost that is classified as abnormal cost should be excluded from the cost information and is transferred to financial accounting for appropriate treatment. The classification of a cost into normal or abnormal cost depends on the frequency of its occurrence. This means that what is classified as abnormal cost in one organisation may be seen as normal in others.

For example, if a shoe factory has four distributing vehicles, the probability that one of them will be involved in a serious accident that will result in total write off of the vehicle in a year is low, if such accident does occur, it can be classified as abnormal loss. But in a transport organisation with about 500 passengers' buses, the probability of such accident is high. Therefore, when such accident does occur, the cost of such accident vehicles is classified as normal cost.

2.4 Elements of Cost

We have earlier defined cost as the value of economic resources used in the production of goods or services. What are these economic resources used in the production of goods or services?

They are basically three Element of Cost namely:

a. Material
b. Labour
c. Expenses

In cost accounting we refer to these three resources as the "elements of cost". Everything produced by man is a combination of materials, labour and expenses. Cost varies with industries. In manufacturing industries, materials may constitute over 60% of cost of production while in coal mining, labour may constitute over 70% of cost of production. The cost accountant logically groups or classifies the three elements of cost to enable him accumulate cost data for the preparation of cost statement.

2.5 Cost Classification

The logical grouping of cost data to enable the cost accountant draw up a cost statement is called cost classification. The elements of cost can be classified in any of the following four ways to arrive at total cost of production.

1. **According to relationship to production**. Those elements of cost that are directly related to production process are classified as Direct Cost and those that are not directly related to the production are classified as Indirect Costs. For example, in a shoe factory, the labour

of a shoemaker is classified as a direct labour cost while the services rendered by the accountant is classified as indirect labour cost.

Direct Cost + Indirect Cost = Total Cost

2. **According to reaction to change in volume of activities**. If the element of cost changes with the volume of activity or output, it is classified as a Variable Cost; but if the element of cost is relatively unchanged with change in volume of activities, it is classified as a Fixed Cost. For example, in a shoe factory, the labour of shoemakers is classified as variable cost while that of supervisors are classified as fixed cost.

   Variable Cost + Fixed Cost = Total Cost.

3. **According to function of the department that caused the cost**. In every organisation, there are certain distinct functions that are noticeable in the organisational chart such as production, administration, marketing, maintenance etc.. Any cost incurred in the organisation is then classified according to the functional unit that caused the cost to a functional unit that caused the cost. For example, a cost is classified as production cost if it is used in the production process as administration, as marketing cost if it used in carrying out marketing functions etc.. For instance, in a shoe factory, the salary paid to the shoemaker is charged to production while that of the accountant is charged to the administration cost.

   Production Cost + Administration Cost + Marketing Cost +

   ………..+ etc. = Total Cost

4. **According to their nature.** All elements of cost may be classified according to their nature. For example, material can be classified as raw materials and components, labour can be classified as skilled or unskilled, and expenses can be classified as rate, rent etc.

   Cost of raw material + Components + Skilled labour + Unskilled labour + Rent + Rate etc. = Total cost.

Conclusion - The cost accountant is at liberty to select any of the above methods of cost classification that suits his peculiar working situation. The total cost can be divided into two categories: Prime cost and Overhead cost.

Prime Cost - It is a collective name for all the direct cost elements i.e.

Direct materials + Direct labour + Direct expenses = prime cost

DM + DL + DE = PC

Overhead Cost - It is a collective name for all the indirect cost elements i.e.

Indirect materials + indirect labour + indirect expenses = Overhead cost.

2.5.1 Ways of Classifying Cost

Natural Classification/ Elements of Cost

This is also known as elementary classification. Under this heading, costs are classified according to nature or elements as follows:

a. MATERIAL COST

The term "Material" refers to all commodities supplied to an undertaking. For costing purposes, materials may be classified may be classified into two broad categories

i. Direct Materials

These are those materials which can be conveniently identified with and can be directly allocated to a particular product, job or process.

ii. I**ndirect Materials**

These are those materials which cannot be conveniently identified with and cannot be directly allocated to a particular product, job or process.

b. LABOUR COST

Labour is an essential factor of production. It is a human resource and participates in the process of production.

Labour cost is a significant element of cost of a product or service. For costing purposes, labour may be classified into two broad categories:

i. **Direct Labour Cost**

This is that labour which can be readily identified with a specific job, contract or work order. It includes all labour directly engaged in converting raw materials into finished goods or altering the construction, composition or condition of the product.

ii. **Indirect Labour Cost**

This is that labour which cannot be readily identified with a specific job, contract or work order. It includes all labour not directly engaged in converting raw materials into finished goods or altering the construction, composition or condition of the product.

c. EXPENSES

All costs other than materials costs and labour costs are termed as expenses. For costing purposes, expenses may be classified into two broad categories:

i. Direct Expenses

All direct costs other than direct materials costs and direct labour costs are termed direct expenses.

These can be readily identified with and thus, can be directly allocated to a particular product, job or process.

ii. **Indirect Expenses**

All indirect costs other than indirect materials costs and indirect labour costs are termed direct expenses.

These cannot be readily identified with and thus, cannot be directly allocated to a particular product, job or process.

Responsibility Classification:

Under this heading, costs are classified according to responsibility for the costs are incurred.

Responsibility centre is unit or function of an organisation under the control of a manager who has direct responsibility for its performance within the organisation. for management control purposes, responsibility centres are classified into the following five categories:

a. **Cost Centre**: It is a responsibility centre for which costs are accumulated. According to CIMA, London Cost Centre is defined as "a production or service, location, function activity or item of equipment whose costs may be attributed to costs units".
b. **Revenue Centre:** It is a responsibility centre for which revenues are accumulated. According to CIMA, London Revenue Centre is defined as "a centre devoted tom raising revenue with no responsibility for production e.g., Sales Centre".
c. **Profit Centre:** It is a responsibility centre for which both costs and revenues are accumulated. According to CIMA, London Profit Centre is defined as "a part of business accountable for costs and revenues".
d. **Contribution Centre:** It is a responsibility centre for which variable costs and revenues are accumulated. According to CIMA, London Contribution Centre is defined as "a profit centre whose expenditure is reported on a marginal or direct cost basis".
e. **Investment Centre**: It is a responsibility centre for which costs, revenues and investment in assets are accumulated. According to CIMA, London Investment Centre is defined as "a profit centre whose performance is measured by its return on capital employed".

Time Classification:

Under this heading, costs are classified according to time of incurrence. Based on these costs are classified as follows:

a. **Historical Costs:** These are the actual costs which are ascertained after these have been incurred.
b. **Pre-determined Costs**: These are the future costs which are ascertained in advance before production starts, on the basis of specification of all the factors affecting costs. These may be either standard costs or estimated costs.
    i. **Standard Cost**: it is a pre-determined cost which is computed from management's standards of efficient operation and the relevant necessary expenditure, on the basis of engineering specifications of all the factors affecting cost.
    ii. **Estimated Cost:** it is a pre-determined cost which is computed in advance before the production starts, on the basis of actual costs adjusted for anticipated future changes.

Controllability Classification:

Under this heading, costs are classified according to degree of manager's influence on such costs. Based on these costs are classified as follows:

a. **Controllable Costs**: These are costs which can be influenced by the action of managers at a given level of authority.
b. **Uncontrollable Costs:** These are costs which cannot be influenced by the action of managers at a given level of authority.

Traceability Classification:

Under this heading, costs are classified according to the degree of trail (attributableness) of such costs to a cost unit.

Different categories of cost item may also be determined according to the ability of a decision maker to relate an item of cost to any of the cost driver.

A cost driver is defined as a product, process, unit, section or a centre in which any of the expenditure or revenue may be allocated to within an organisation.

If a cost is a traceable cost, then it is a controllable cost. If it is a controllable it is a variable cost. If it is a variable cost, then it is a direct cost.

a. **Direct Costs**: these are costs which can be identified easily and indisputably with a unit of operation, cost unit or cost centre.
b. **Indirect Costs:** these are costs which cannot be allocated but which can be apportioned to cost unit or cost centre.

Functional Classification:

Under this heading, costs are classified according to various function or departments within the organisation. Based on these, costs can be classified as follows:

a. **Production Cost:** this is the cost of sequence of operations which begins with supplying materials, labour and services and ends with the primary packing of the product.
b. **Administrative Cost**: this represents the cost of formulating the policy, directing the organisation and controlling the operations of an undertaking which is not related directly to production, selling, distribution, research or development activity or function.
c. **Selling Cost**: this represents the cost of seeking to create and stimulate demand and of securing order. Thus, this is the cost of promoting sales and retaining customers.
d. **Distribution Cost**: this represents the cost of the "sequence" of operations which begins with making the packed product available for dispatch and ends with making the reconditioned returned empty package, if any, available for re-use.
e. **Research Cost**: the cost of searching for new or improved products, new application of materials, new or improved methods.
f. **Development Cost**: the cost of the process which begins with the implementation of the decision to produce a new or improved product or to employ a new or improved method and ends with commencement of formal production of that product or by the method.
g. **Finance and Accounts Cost**: these are costs incurred in the finance and account department such as interest, bank charges, notional expenses etc.

Economic Characteristics Classification:

Under this heading, costs are classified as special costs used for managerial decision making. Based on these costs are classified as follows:

a. **Relevant Costs**: these are those future costs which differ under different alternatives. These can be changed by the decision of the management.
b. **Irrelevant Costs**: these are costs which are not relevant. These cannot be changed by the decision of the management.
c. **Sunk Costs:** these are historical or past costs incurred by a past decision. Since sunk costs cannot be changed by later decision, these are not relevant for decision making.
d. **Shut-down costs:** these are those fixed costs which continue to be incurred even when a plant is temporary shut-down.

e. **Out of Pocket Cost**: these are those costs which involve cash outlay. These can be avoided or saved. These are used in decisions relating to fixation of selling price during depression, make or buy etc.
f. **Opportunity Costs**: it is the cost of next best alternative. It is the value of sacrifice made in accepting an alternative course of action.
g. **Imputed Costs**: these are the notional costs which do not involve any cash outlay. There are costs that similar to opportunity cost.
h. **Differential Costs:** it is the increase or decrease in total cost (variable & fixed) due to change in activity level, technology, process or method of production etc. It is also known as Incremental Cost when the cost increases and as Decremental Cost when the cost decreases.
i. **Marginal Cost:** it is the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. In practice, this is measured by the total variable cost attributable to one unit.
j. **Replacement Cost**: it is the cost at which an asset identical to that which is to be replaced, could be currently purchased. In other words, it is the current purchase price of an identical asset.
k. **Conversion Cost:** it is the cost of converting a raw material into finished product. It is the aggregate of direct labour cost, direct expenses and production overheads.
l. **Committed Costs**: these are those costs which cannot be avoided in the short run once the decision to incur them has been taken.
m. **Discretionary Costs**: these are those costs which can be avoided by managerial decisions.

Behavioural Classification:

This is also known as variability classification. Under this heading costs are classified according to their degree of responsiveness to changes in activity level. Costs are hereunder classified according to the way they behave hence, the word Cost Behaviour.

Revision Questions

Multiple Choice Questions

Bobby Bobio Ltd has recorded the following data in the two recent periods

Total costs of Production	Volume of Production
=N=	Units
27,000	1,400
36,000	2,200

1. What is the cost estimate for the fixed costs per period?

   (a)₦27,000 (b)₦19,800 (c)₦9,600 (d)₦10,200 (e)₦10,000
2. How is production fixed overhead cost classified?

   (a)variable cost (b)fixed cost (c)prime cost (d)conversion cost (e)mixed cost
3. Cost behaviour analysis focuses on:

   (a)how costs react to changes in profit (b)how costs change over time (c)how costs react to changes in activity levels (d)how costs react to revenue (e)how costs react to turnover
4. From the figures provided below, determine marginal cost

Total variable cost for level (1)	₦1,800@30units
Total variable cost for level (2)	₦3,000@50 units

   (a)₦60 (b)₦90 (c)₦30 (c)₦50n (d)₦50 (e)₦40
5. From the production of a product X, the cost of producing 5,000 units is ₦24,000 while the cost of 7,000 units is ₦29,600. What will be the budget cost allowance for 8,000 units

   (a)₦38,400 (b)₦32,400 (c)₦33,829 (d)₦32,000 (e)₦22,400
6. A cost that changes in total in direct proportion to the change in activity level is a

   (a)step cost (b)mixed cost (c)variable cost (d)fixed cost (e)curvilinear cost
7. Mixed costs contain both:

   (a)production and period costs (b)fixed and variable cost (c)direct and indirect costs (d)controllable and uncontrollable costs (e)avoidable and unavoidable
8. The relevant range is:
   a. a relatively wide range of sales where total variable costs remain the same
   b. a relatively wide range of sales where all costs remain the same
   c. a relative narrow range of production where total variable costs remain the same

d. a budgeted activity level where all costs are relevant

e. a relatively wide span of production where total fixed costs are expected to remain the same

9. A supervisor's salary of ₦100,000 per month is an example of a __________

   (a)fixed cost (b)mixed cost (c)variable cost (d)universal cost (e)none of the above

10. An equipment lease that specifies a payment of ₦10,000 per month plus ₦50 per machine hour used is an example of a _______

    (a)fixed cost (b)variable cost (c)step cost (d)mixed cost (e)current cost

Theory Questions

1. Explain the term "Cost Classification"
2. State and explain various ways of classifying cost.

CHAPTER THREE

COST ANALYSIS AND BEHAVIOUR

3.1 Learning Objectives

At the end of the chapter, the students should be able to know and understand the;

i. Meaning of cost analysis;
ii. Techniques for cost estimation; and
iii. Methods used in cost analysis.

3.2 Introduction

Cost accounting information is futuristic in nature and for effective prediction of costs. It is essential for cost accountant to know the behaviour of costs. Cost behaviour is the study of the relationship that exit between a given cost and activity and how cost respond to the increase or decrease in activity. Activity can be machine hours, Man hours, number of students, output in units etc.

Cost behaviour determined how the total cost is affected by change in volume of output or production. For example, cost behaviour shows that a 100% increase in output will generate about 80% increase of total cost of production. Equally, a 40% reduction in production may give rise to only 10% reduction of the total cost. The reason for the disparity in change between the increase or decrease in volume of activities and the total cost is that while it is true that fixed costs remain relatively unchanged, the variable cost elements do not change at the same, rate with increased or decreased level of production. While the fixed cost may remain fixed for a time, it may change if stretched too far.

3.3 Roles of Cost Behaviour

The important roles that cost behaviour play in the life of an organisation cannot be overemphasis. Cost behaviour is vital for the management and the accountants who may be in the position to advice. The roles include the following:

i. It aids in the application of variance analysis in a system of budgetary control.
ii. It assists management in taking short term decision

iii. It assists in preparation of budgets
iv. It assists in management in the area of one-off decision
v. It helps in the provision of past cost, present and future cost.

3.4 Patterns of Cost Behaviour

Cost behaviour deals with reaction of total cost to changes in output. Generally, cost behaviour can be classified into the following.

1. Variable Cost
2. Fixed Cost
3. Mixed Cost
4. Step Cost

3.4.1 Variable Cost

This is a type of cost that moves in sympathy level with the level of activities. It is a cost that increases in total, as output increase, but the cost per unit remains constant for all level of output within the relevant range. The necessary and sufficient condition for a cost to be regarded as variable is that the cost per unit is constant for all levels of output.

Examples of variable cost include direct material, direct labour, variable factory overhead, e.g., fuel, power, royalties, time etc.

An example of this is detailed below

Output (units)	₦5,000	₦7,500	₦10,000
Direct material cost	₦50,000	₦75,000	₦100,000
Direct material cost/output	₦50,000 ₦5,000	₦75,000 ₦7,500	₦100,000 ₦10,000
Direct material Cost per unit	₦10	₦10	₦10

It will be observed that at each level of the output the variable cost per unit remains constant. Graphically, total variable cost can be represented as follows:

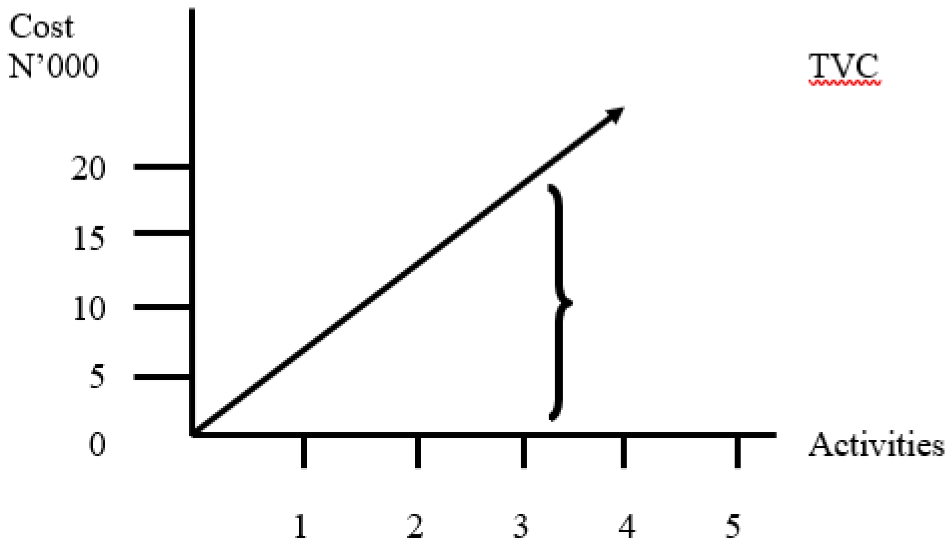


Figure 1

Characteristics of Variable Cost

- Total variable cost moves in direct proportion to variations in the level of activity.
- Variable cost per unit tends to be constant within the relevant range.
- It is controllable by a specific department head.

3.4.2 Fixed Cost

Total fixed cost does not move in the same direction with the level of activities, it is a type of cost that remain constant irrespective of the level of activities though within relevant range. It is important to note the relevancy of TFC because no cost is really fixed in the real sense. For instant, a production machine has its maximum capacity and if there is need to produce above its usual capacity, there will be need to acquire additional machine and production time.

The fixed cost is a cost that remain constant in total, at all levels of production, the cost per unit reduces as output increases.

Fixed cost is also a cost which accrues in relation to the passage of time and which within certain output or turnover limit tends to be unaffected by fluctuations or changes in volume of output or turnover. It is constant in total only in relation to a given period of time and wide range of activity called relevant range. It is sometimes referred to as period cost. Examples of fixed cost includes salaries of production manager, salaries of security guards, rent and rates, salaries of lecturers, insurance on property, depreciation that is calculated on straight line etc.

An example of this is detailed below

Output (units)	₦1,000	₦2,500	₦3,000
Total rent (N)	₦30,000	₦30,000	₦30,000
Total rent/output	₦30,000 ₦1,000	₦30,000 ₦2,500	₦30,000 ₦3,000
Rent per unit (N)	30	15	10

It will be observed that as output increases the fixed cost (rent) reduces per units.

Graphically total fixed can be represented as detailed below:

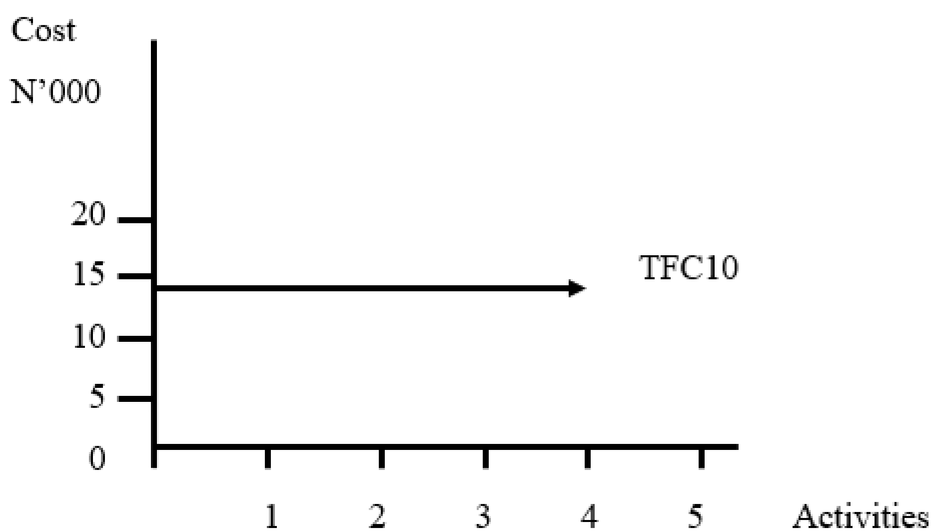


Figure 2

Also note that FC per activity will be reducing as activities increases and can be represented below:

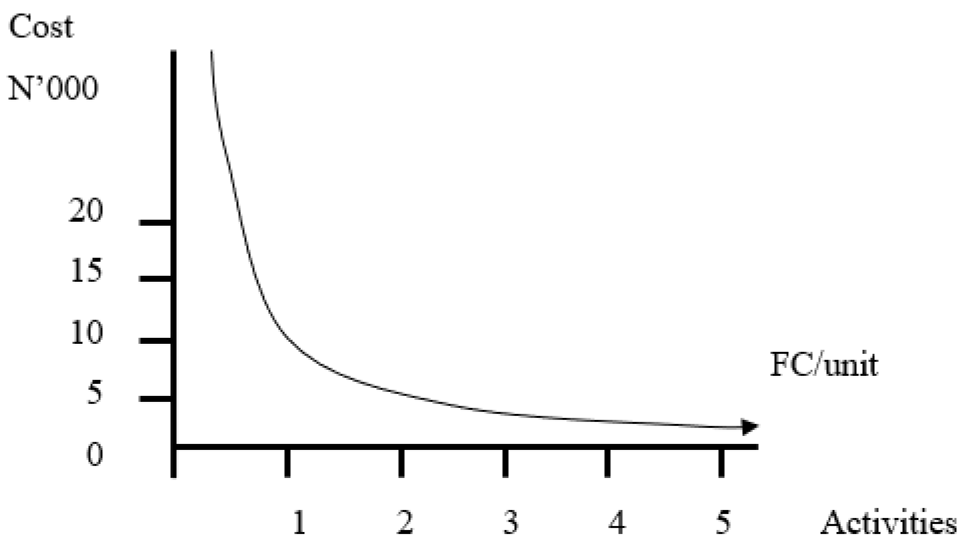


Figure 2

3.4.3 Mixed Cost

A mixed cost is a combination of variable cost and fixed cost. It is partly variable and partly fixed cost. It is also known as semi variable or semi fixed cost. Examples of mixed costs include electric bills, telephone bills, and maintenance cost etc.

Graphically, mixed cost can be represented as follows:

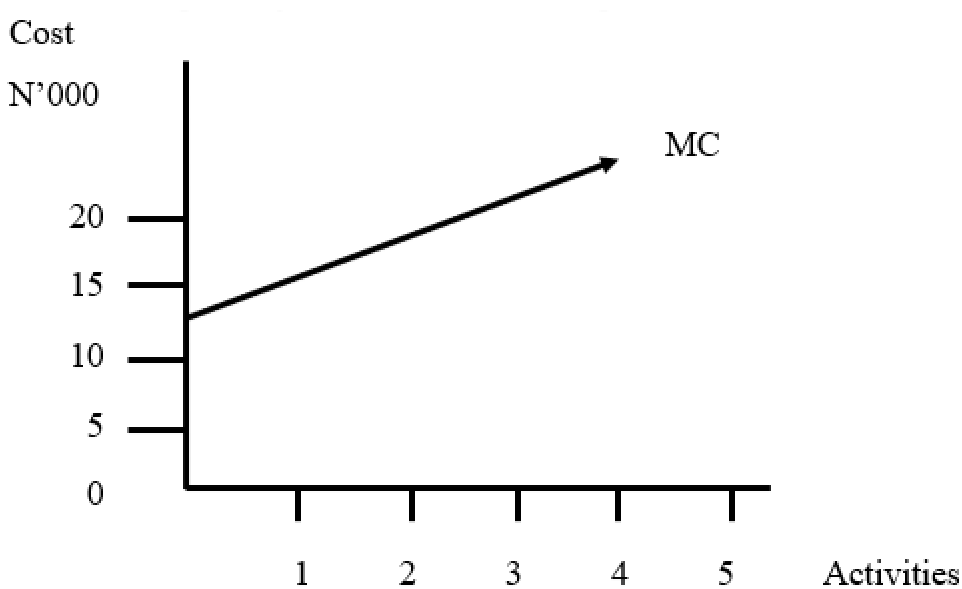


Figure 3

3.4.4 Stepped Fixed Cost

This cost fixed within a given range and -when the range is exceeded it will increase by a lump sum and keep as this level until another lump sum increase.

A stepped fixed cost is a cost that remains constant in total for a given level of output, but will increase, if the output level is exceeded. Examples include salaries rent, rate etc e.g., if a warehouse has a capacity of 10,000 units and a monthly rental of ₦50,000 is paid. If the units produced increase above 10,000 units will require additional rent cost.

Graphically, stepped fixed cost can be represented as follows:

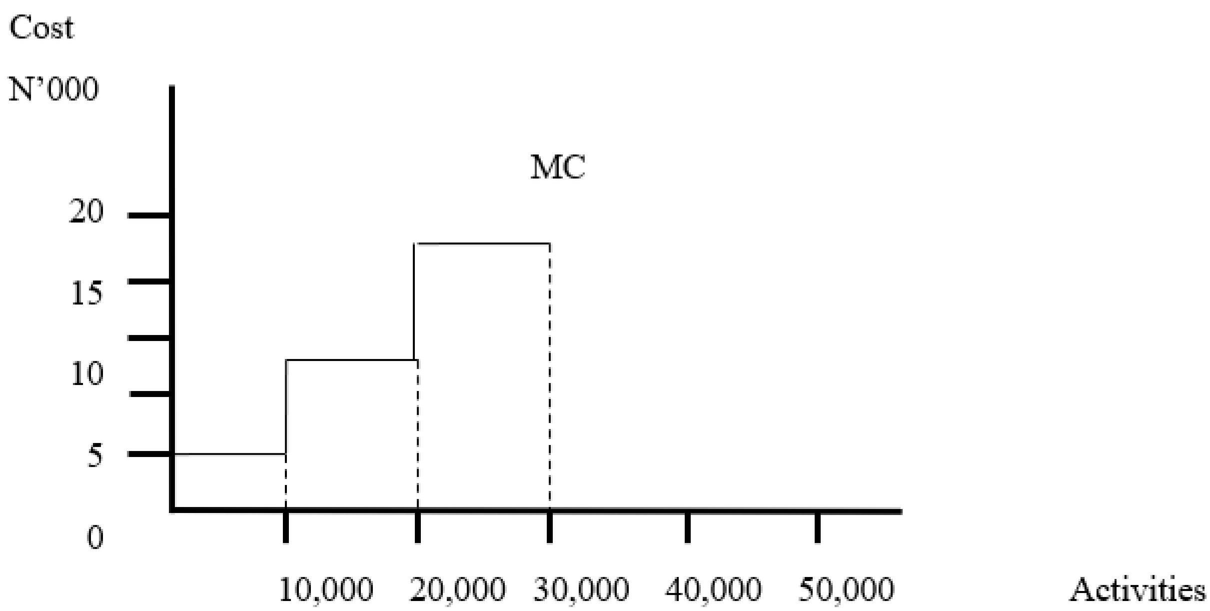


Figure 4

3.5 Cost Separation Techniques

Determining how cost change to the level of activities is an importance factor for effective decision making in organisation. Cost accountant as every point in time should determine whether cost is fixed or variable for him to give quality advice to management. In cost accounting, it is frequently required that total cost be separated into its components of variable cost and fixed cost.

The separation is required for the following reasons:

1. Planning - When preparing flexible budget, it is necessary to know, whether each item of cost is variable or fixed.
2. Controlling - In analysing variables, which are used for control purpose where flexible budgeting is in used, each item of cost must be analysed into variable and fixed cost component.
3. Decision Making - In many decision-making situation, majority of fixed cost are irrelevant, it is therefore necessary to identify variable cost and fixed cost.

When having a semi variable cost or mixed cost which comprises the elements of both fixed and variable cost, it can be segregated or separated into fixed and variable cost by a technique called Cost Estimation.

This technique measures the historical costs with a view to help in predicting future costs for management decision making i.e., on this premise that a mixed cost must be properly segregated into fixed and variable elements. The techniques used in separation of semi-variable cost into its fixed and variable elements is called "Cost Estimation Technique". This technique makes use of a mathematical form called a cost-volume formula as thus:

$Y = a + bx$

where Y= Total cost
a = Total fixed cost
b = Variable cost per unit
x = level of activity or number of units

3.6 Methods Available to Analyse Total Cost into Variable and Fixed Cost Component

The common techniques of separating mixed cost, semi-variable cost or semi fixed cost are:

1. Account Analysis Method
2. High and Low Points Method
3. Scatter Graph Method
4. Regression Analysis Method or Least Squares Method

3.6.1 Account Analysis Method

This method involves the identification of cost and them separating them into fixed and variable cost components.

Under this method the relevant Manager involve, uses his experience and intuition to classify each item of expenditure into variable cost and fixed components. The analysis is highly judgmental and therefore subjective. Two managers analysing the same set of cost data may arrived at different classification.

Merits

i. It is simple
ii. It is fast and inexpensive
iii. It can be revised and changes easily to reflect current situation
iv. It does not require mathematical knowledge.

Demerits

i. It is subjective and not scientific
ii. It is based on past cost
iii. It may not be reliable
iv. It is based on single observation to determine the cost function
v. A cost that is fixed to an organisation may be classified as Variable Cost to another organisation.

Illustration 1

The following are the actual cost of Fade Manufacturing Limited for the month of June 2014

	₦
Direct Material	36,000
Direct Labour	55,200
Depreciation	19,000
Supervisor remuneration	12,600
Factory rent	11,000
Maintenance	11,400
Fuelling	15,400

Office Expenses	9,200
Other expenses	27,200
Total	197,000

Production for the month of June were 5,000 units.

You are required to determine the following:

a. Variable cost per unit
b. Total fixed cost
c. Total cost of production if 7,500 units was produced in July 2014

Suggested Solution 1

FADE MANUFACTURING LIMITED

Account Analysis Method

Cost Items	Total Cost	Fixed Cost	Variable Cost
	N	N	N
Direct Material	36,000	-	36,000
Direct Labour	55,200	-	55,200
Depreciation	19,000	19,000	-
Supervisor remuneration	12,600	12,600	-
Factory rent	11,000	11,000	-
Maintenance	11,400	-	11,400
Fuelling	15,400	-	15,400
Office Expenses	9,200	9,200	-
Other Expenses	27,200	27,200	-
	197,000	79,000	118,000

a. Variable Cost per unit $= \frac{Total\ Variable\ Cost}{No\ of\ Units\ produced} = \frac{₦118{,}000}{5{,}000\ units} = ₦23.6$

b. Total Fixed Cost = ₦79,000

c. Total Cost of producing 7,500 units

TC = TVC + TFC

= 23.6 (7500) + 79,000

= 177,000 + 79,000

TC = ₦256,000

3.6.2 High and Low Method

The statistical data for the volume of activity such as number of units produced over a period, number of hours worked etc are kept. The data for the semi variable costs are maintained for the same period.

Using this technique of cost separation, records of more than one period is expected to be used. Historical records relating to a defined period of time are used and in particular two records are extracted corresponding to:

- The highest level of activity and the associated costs
- The lowest level of activity and the associated costs
- The difference between the highest cost and the lowest cost is the total variable cost of the difference in output, from this the variable cost per unit can be calculated and the fixed cost be derived through substitution method.

Merits

i. It is simple to compute.
ii. It is objective than account analysis method.
iii. It is useful for other business or analysis such as cost of capital, budgeting, etc.
iv. It is capable of providing consistent result from different users.

Demerits

i. It only relies on two extreme activities which may not be the true position of the company
ii. Historical data shown as extreme may be abnormal which will ultimately give wrong figures.
iii. The correctness and accuracy of values.

When using the method, the following procedures are adopted.

Procedures:

1. Determine the difference between the highest output and the lowest output.

2. Determine the difference between the cost associated with the highest output (not necessarily the highest cost) and the cost associated with the lowest output (not necessary the lowest cost).
3. Calculate the variable cost per unit by dividing the result in 2 above by the result in 1 above i.e., Variable cost per unit $= \frac{Difference\ in\ Cost}{Difference\ in\ Output}$
4. Making use of the result in = 3 above determine the total fixed cost.

Illustration 2

The table below reflects the months activities of Model Shoes Factory Ltd, and the electricity consumption for the months in 2013.

Month	Unit of Shoes Produced (pairs)	Electricity Bill (₦)
January	9,500	31,500
February	9,000	30,000
March	11,000	35,000
April	10,000	32,000

You are required to determine the fixed cost and variable cost components of the electricity bill price using high and low points method.

Suggested Solution 2

Model Shoes Factory Ltd

	Production of Shoes (Pairs)	Electricity N
(i) High	11,000	35,000
Low	(9,000)	(30,000)
	2,000	5,000

Variable cost per unit $= \frac{Difference\ in\ Cost}{Difference\ in\ Level\ of\ Activity} = \frac{₦5,000}{2,000}$

VC/Unit = ₦2.50

(ii) Substitute in either the high or low cost, the fixed cost element for electricity would be:

	High	Low
Production (shoes pairs)	11,000	9,000
	₦	₦
Total Cost	35,000	30,000

Variable Cost (₦2.50 x 11,000)	(27,500)	(₦2.50 x 9000)	(22,500)
	7,500		7,500

Alternatively,

Total fixed cost = Total cost – Total variable at cost at 11,000
= 35,000 – 2.5 (11,000)
= 35,000 – 27,500
= 7,500

OR

At 9,000 volumes
TFC = TC – TVC
= 30,000 – 2.5(9,000)
= ₦7,500

NOTE: The above illustration assumes that fixed cost will always remain constant at all activity level. However, this position may not be accurate. In practice, fixed cost will increase or step up once a specific range of activity are exceeded. Although, the increase will not occur at every level of activity.

3.6.2.1 High and Low Points: Adjusting for Inflation

When the high and low points method is used to estimate fixed costs and variable costs, the cost figures could have been obtained at two time periods far apart from each other. If so, the effect of inflation on costs should not be ignored.

It needs to be emphasised that where inflation makes the costs in each period impossible to compare, the cost should be adjusted to the same price by means of a price level index.

The cost could be adjusted to cost levels at a base period, alternatively, cost could be adjusted to a current price level.

To adjust cost in period 'A' to a base period figure, the required adjustment is:

$$\frac{Cost\ index\ for\ base\ period}{Cost\ in\ period\ 'A' \times Cost\ Index\ for\ period\ 'A'}$$

To adjust costs to current price levels, the required adjustment is:

Cost in period 'A' = $\frac{Cost\ index\ for\ current\ period}{Cost\ Index\ for\ period\ 'A'}$

Illustration 3

You are given the following historical data concerning Lasun Plc.

Years	Output units	Total Cost	Average Cost Level Index
		N	
1	6,500	14,500	100
2	8,000	17,920	112
3	9,000	20,910	123
4	6,000	20,160	144
5	7,500	24,800	160

Required:

a. Using high and low points method to fix the appropriate cost equation for Y = a + b(x)
b. In year six, if the price index is 180 and the company is expected to produce 85,000 units, calculate the expected total cost.

Suggested Solution 3

LASUN PLC

a. Level of activities	Output (units)	Associated Cost
		₦
High	9,000	17,000
Low	(6,000)	(14,000)
Difference	3,000	3,000

Variable cost per unit = $\frac{Difference\ in\ cost}{Difference\ in\ output} = \frac{N3{,}000}{3{,}000}$

VC/Unit = ₦1

Calculation of fixed cost

Y = a + b(x)

At low level

₦14,000 = a + ₦1 (6,000)
₦14,000 = a + ₦6,000
₦14,000 - ₦6,000 = a
a = ₦8,000

b. To fix the cost equation

$Y = a + b(x)$

$Y = ₦8,000 + ₦1\ (x)$

c. Calculation of total cost in year six with 85,000 units

$Y = a + b\ (x)$

$Y = ₦8,000 + ₦1\ (85,000)$

$Y = ₦8,000 + ₦85,000$

$Y = ₦93,000 \times {}^{180}/_{100}$

$Y = ₦167,400$

Working

Year	Output Units	Total Cost (₦)		Average Cost Level Index		Real Cost
1	6,500	14,500	×	$\frac{100}{100}$	=	14,500
2	8,000	17,920	×	$\frac{100}{112}$	=	16,000
3	9,000	20,910	×	$\frac{100}{123}$	=	17,000
4	6,000	20,160	×	$\frac{100}{144}$	=	14,000
5	7,500	24,800	×	$\frac{100}{160}$	=	15,500

3.6.3 Scatter Graph Method

This is one of the statistical methods adopted in trying to segregate the fixed and variable costs components of mixed costs, as a result of the limitation imposed on the high and low points method segregating mixed cost i.e. the over reliance on the two extreme values, it was discovered that there was need to consider all the available observations when drawing a line to establish a cost estimate. The graphical method recognised this and used all the available observation in arriving at the cost estimate, the total is plotted on the graph for each activity level. A line of best fit is drawn diagonally across the observed graph in such a way that following rules are observed.

a. If the number of observed data on the graph is even the line of best fit is drawn across the graph in such a way that the data are equally divided into two parts.
b. If the number of observed data is odd, then the line of best fit is drawn in a manner that one of the data is completely ruled out while the remaining data are equally divided into two parts.

The interception of the line of the best fit along the y - axis represents the constant factor or total fixed cost while the gradient of the line of the best fit represents the level of variability or variable cost element.

However, this approach is rejected in practice due to the fact that both the variable and fixed cost line is fitted to these scattered points by visual approximation.

Merits

i. It is objective when compared with accounts analysis method
ii. It makes use of all variables available unlike high and low points method

Demerits

i. It is subjective when drawing line of best fit
ii. It is not reliable to further statistical analysis.

Illustration 4

Hashim Milling Company is seeking whether there is a linear relationship between the level of advertising expenditure and the subsequent sales revenue generated. The available data for the last eight months are as follows:

Month Advertising Expenditure	Sales ₦'000	Revenue ₦'000
January	2.65	30.0
February	4.25	45.0
March	1.00	17.5
April	5.25	46.0
May	4.75	44.5
June	1.95	25.0
July	3.50	43.0

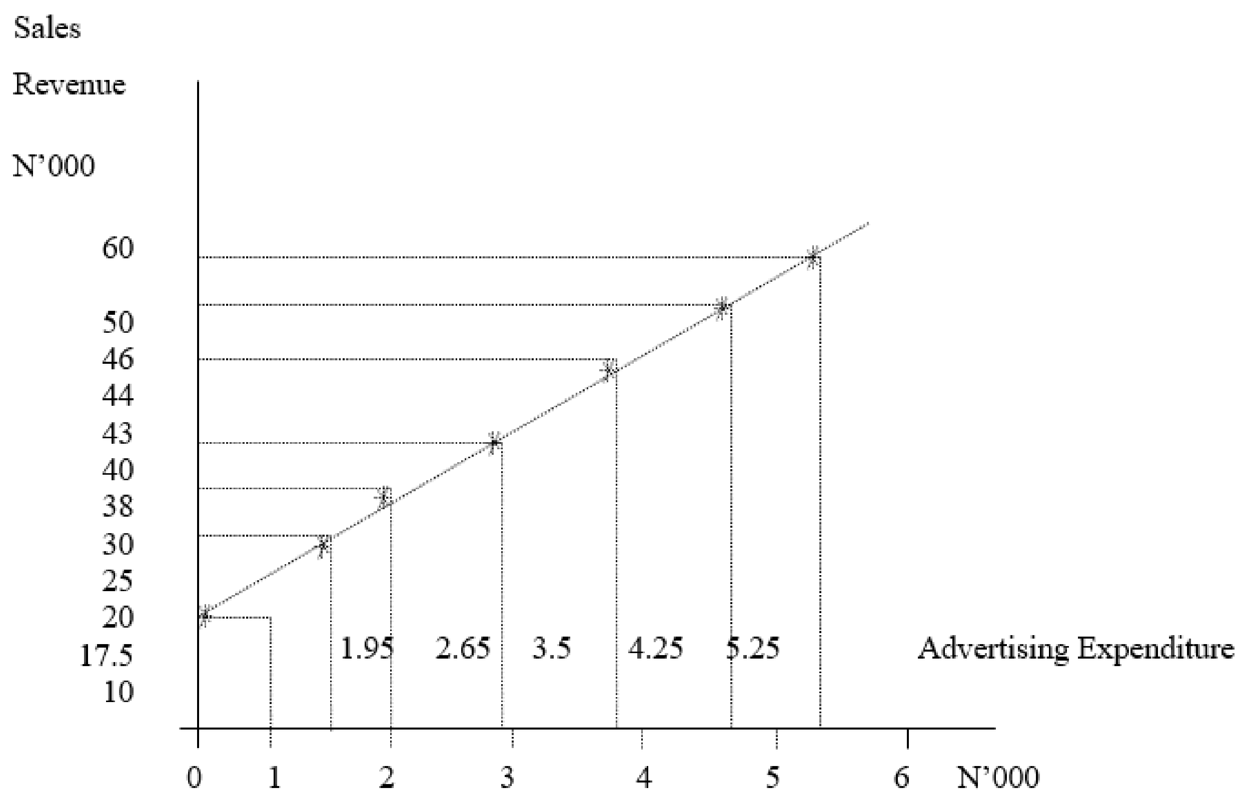
August	3.00	38.5
	26.35	289.5

Required:

On a suitable graph plot advertising expenditure against sales revenue or vice versa as appropriate.

Suggested Solution 4

Hashim Milling Company



3.6.4 Least Square or Linear Regression Method

The least square method is an improvement or visual regression line approach used in scatter graph method in segregating fixed and variable costs components of mixed cost. The lease squares method employs more statistical analysis than the two methods earlier discussed.

This method determines mathematically the regression line of best-fit, the associated level of subjectivity inherent in estimating the line of best-fit across the scatter diagram.

The regression equation for straight line that meets this requirement can be found in the application of linear equation formula: $y = a + b(x)$

Where Y = total or Mixed Cost or dependent variable
a = Constant factor or total fixed cost
b = Variable cost per unit
x = Independent variable or activity level

To illustrate the least square method, we may assume that overhead cost representing 'y' and activity level representing 'x' have been recorded, therefore 'a' and 'b' representing the fixed and variable cost will be derived as follows:

$\sum Y = na + b\sum x$ ………………………equation I
$\sum XY = a\sum x + b\sum x^2$ ……………………..equation II
Where n – number of observations

Merits

i. It assists ion the use of computers and electronic computations.
ii. It makes use of entire data, unlike the accounts analysis and high-low points methods
iii. Line of best-fit can be easily recognised and be extended through the use of multiple regression analysis.

Demerits

i. In practice, relationship between cost and activity level may not be linear, it may be curve linear.
ii. A large number of observations is required.
iii. The elimination of non-random variables can reduce the available data and frustrate any attempt to fix the curve statistically to the observation.

Revision Questions

Multiple Choice Questions

Bobby Bobio Ltd has recorded the following data in the two recent periods

Total costs of Production =N=		volume of Production Units
2020:	27,000	1,400
2021:	36,000	2,200

1. What is the cost estimate for the fixed costs per period?

   (a)₦27,000 (b)₦19,800 (c)₦9,600 (d)₦10,200 (e)₦10,000
2. How is production fixed overhead cost classified?

   (a)variable cost (b)fixed cost (c)prime cost (d)conversion cost (e)mixed cost
3. Cost behaviour analysis focuses on:

   (a)how costs react to changes in profit (b)how costs change over time (c)how costs react to changes in activity levels (d)how costs react to revenue (e)how costs react to turnover
4. From the figures provided below, determine marginal cost

   Total variable cost for level (1) ₦1,800@30units

   Total variable cost for level (2) ₦3,000@50 units

   (a)₦60 (b)₦90 (c)₦30 (c)₦50n (d)₦50 (e)₦40
5. From the production of a product X, the cost of producing 5,000 units is ₦24,000 while the cost of 7,000 units is ₦29,600. What will be the budget cost allowance for 8,000 units

   (a)₦38,400 (b)₦32,400 (c)₦33,829 (d)₦32,000 (e)₦22,400
6. A cost that changes in total in direct proportion to the change in activity level is a

   (a)step cost (b)mixed cost (c)variable cost (d)fixed cost (e)curvilinear cost
7. Mixed costs contain both:

   (a)production and period costs (b)fixed and variable cost (c)direct and indirect costs (d)controllable and uncontrollable costs (e)avoidable and unavoidable
8. The relevant range is:
   a. a relatively wide range of sales where total variable costs remain the same
   b. a relatively wide range of sales where all costs remain the same
   c. a relative narrow range of production where total variable costs remain the same

d. a budgeted activity level where all costs are relevant
e. a relatively wide span of production where total fixed costs are expected to remain the same

9. A supervisor's salary of ₦100,000 per month is an example of a __________
   (a)fixed cost (b)mixed cost (c)variable cost (d)universal cost (e)none of the above
10. An equipment lease that specifies a payment of ₦10,000 per month plus ₦50 per machine hour used is an example of a _______
   (a)fixed cost (b)variable cost (c)step cost (d)mixed cost (e)current cost

Theory Questions

1. The following data relates to the working hours of various machines in the first week of April 2006 and the accumulated electricity bill merciful-events ventures:

Days	Operating Hours	Cost of Electricity Bill (₦)
Monday	1,500	7,500
Tuesday	1,300	6,500
Wednesday	2,000	10,000
Thursday	1,800	9,500
Friday	2,400	11,000
Saturday	1,200	7,040
Total	10,200	51,540

You are required to determine the fixed and variable costs per unit of the electricity bill for the week using least square method.

2. The following are the machine hour and repair cost of Olukunle Mill Ltd over a six-week period.

Week	1	2	3	4	5	6
Quantity produced	6,000	4,500	7,500	9,000	6,000	3,000
Repairs cost (₦)	9,000	9,000	12,000	15,000	10,500	7,500

Required:

Separate the repair costs into the fixed and variable component by using:

a. The high and low points method

b. The regression analysis method.

3. Hassan Plc kept the following records concerning indirect material for the past four months.

	January	February	March	April
Machine hours	900	1,100	750	800
	₦	₦	₦	₦
Opening Stock	1,250	1,200	1,300	800
Closing Stock	2,500	1,550	1,800	2,900
Purchases	5,900	6,000	4,400	6,100

Required:

a. To separate the material cost into fixed and variable components by using:
   i. Regression analysis method
   ii. High and low points method

b. Estimate the total indirect material cost in May 2000 machine hours are projected to be used for each method in (a) above.

4. You are given the following historical cost data concerning Lasun Plc.

Years	Output (Units)	Total Cost (₦)	Average Cost (Level index)
1	6,500	14,500	100
2	8,000	17,920	112
3	9,000	20,910	123
4	6,000	20,160	144
5	7,500	24,800	160

Required:

a. Using high and low points method to fix the appropriate cost equation for Y=a+b(x)

b. In year six, if the price index level is 180 and the company is expected to produce 85,000 units. Calculate the expected total cost.

CHAPTER FOUR

INVENTORY CONTROL, MANAGEMENT AND EVALUATION MATERIAL COSTING

4.1 Learning Objectives:

At the end of this chapter, the students are expected to know and understand;

i. The meaning and types of inventories;
ii. Various methods of pricing and valuation of inventory;
iii. The meaning and various methods of stock taking; and
iv. Various control techniques and inventory management.

4.2 Introduction

In manufacturing industries or organisations such as textile, breweries, pharmaceutical companies etc, material constitute over sixty percent of the cost of production process. In most third world countries, one of the major problems stunting the growth of factories is the shortage of materials because of various government policies aimed at conserving scarce financial resources. Most of the manufacturing organisation succeeded in sourcing their materials needs locally through intensive research while others could not because of the nature of the materials and/or the machine used in such factories.

Both internal and external sourcing of the raw materials are expensive for the third world countries. The problem of materials scarcity has forced some factories to fold up, some produce below capacity while others produce inferior goods because of the type of available raw materials.

In advanced countries also, many organisations have liquidated because of no availability of specific type of materials or poor material management.

CIMA defines raw materials as "goods purchased for incorporation into products for sale". We refer to all materials that become part of the product. The cost of which are directly charged as part of prime cost. Depending on the nature of the activities carried on by an organisation. Materials can be categorised into the following:

a. Raw materials needed to produce a finished product. Such is purchase to the stores and subsequently requested by the production department for use.
b. Work-in-progress - These are raw materials upon which production process has commenced but has no gotten to the final stage of the production process.
c. Component for assembly into a finish product.
d. Finished products - These are the products or services that have reach the final stage of production process which have also met the final consumers' satisfaction.
e. Indirect materials are used by one or more cost centres of an organisation - packaging, fuel and lubricant etc.

4.3 Material Planning and Control

Materials are required, obtained, stored and used to achieve its objectives. It is essential to provide management with information that would guide their decision in respect of materials acquisition, planning, control and pricing.

Planning - In planning for materials, the organisation should determine ways and means of maintaining optimum quantity of materials so as to avoid overstocking and stock out. The plans should identify the reliable and cheap sources of materials on both short- and long-term basis.

Control - Material control relates to the steps taken by managers to conform with the plan. The control process involves maintaining various accounting records which will be compared with the plan to evaluate the uniformity with the plan. Reports are usually demanded from various units associated with material handling. The reports help to evaluate the accuracy of the plan and identify where corrective actions should be taken.

Materials control is the system that ensures the provision of the required quality of materials of the required quality, at the required time and at the least possible cost. If a cost accounting system is to be fully effective, there must be an adequate system for the control of materials from the time an order is placed with a supplier until the material is issued to production or for other use. Efficient materials control eliminates losses and other forms of waste that usually pass unnoticed. Theft, breakage, deterioration and the use excessive floor space can be reduced to the barest minimum through proper material control.

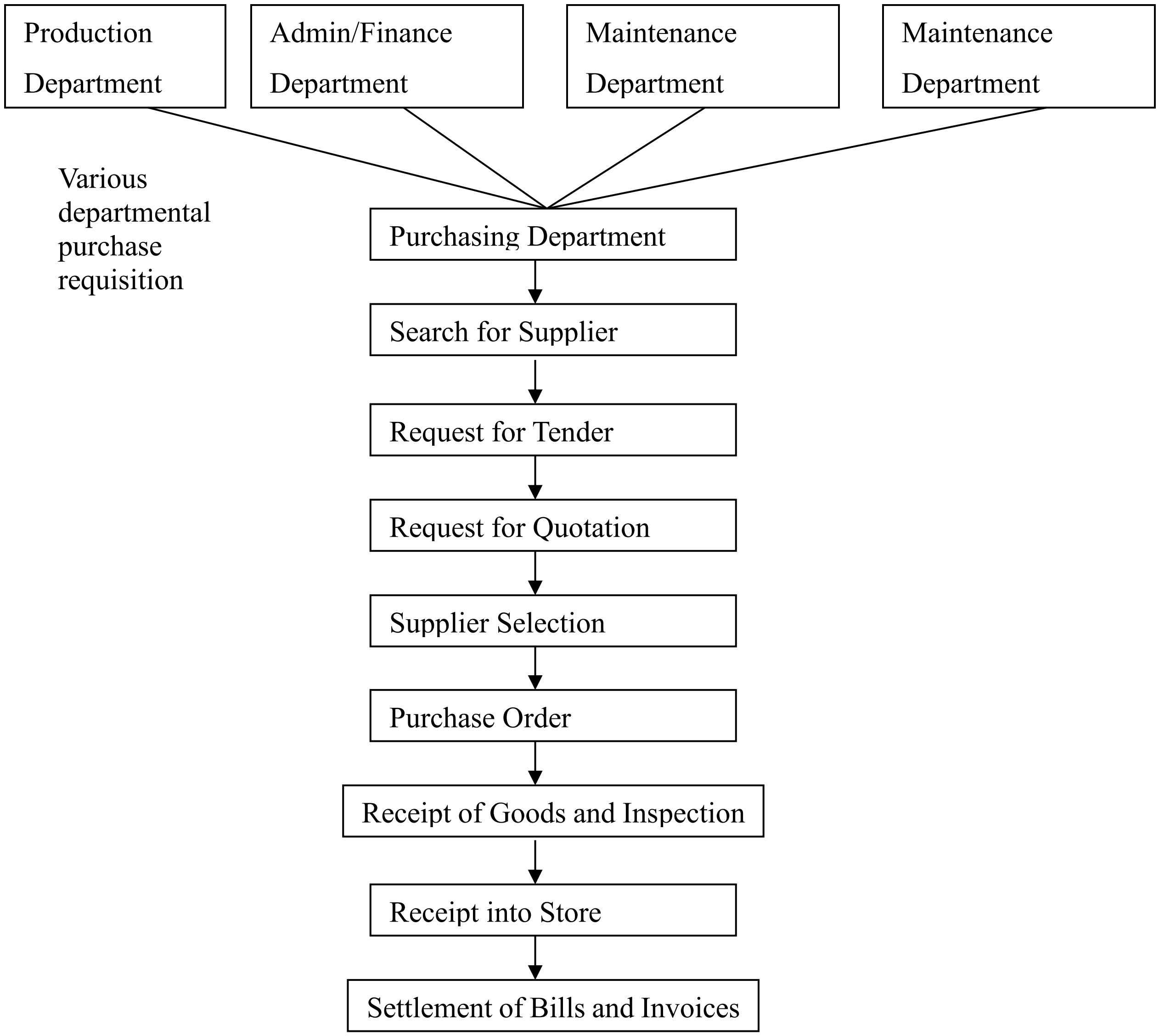
4.4 Requirements for a Good System of Material Planning and Control

The major requirements of a satisfactory system of materials control include the following:

i. Efficient co-ordination between the departments involved in the buying, receiving, inspection and storage of materials and in accounting for them.
ii. Centralisation of purchasing under the authority of the procurement department or officer.
iii. The materials must be well planned and programmed.
iv. Proper classification and where applicable, coding of materials.
v. The use of standard forms for orders, requisition checking, reporting etc. upon which written and signed instructions are given.
vi. The provision of appropriate guidelines for writing regular reports to management which will serve as guide for future decisions and policies on the material management.
vii. Materials must be stored in well planned and properly designed stores, subject to adequate safeguards and supervision.
viii. Work in progress materials too must be adequately recorded and controlled likewise the manufactured stock.
ix. Preparation of periodic budgets for purchase of materials
x. Provision of appropriate storage facility for each material and setting-up of reliable standard for material usage.
xi. Internal check and audit must be introduced and effected in order to ensure that all transactions involving materials and equipment are checked by reliable and independent officials.
xii. Locating alternative source of supply in cakes of emergency and confirmation of reliable sources of each class of materials at least cost.

4.5 Purchasing Procedure

Although the exact system varies from one firm to another by a cost-conscious organisation in respect of purchase and receipt of materials, the study here will describe a typical one, using a typical material control cycle below:



Figure

From the procurement procedures analysed above.

Materials are eventually brought to the stores before being issued to production unit or other users.

Note that the above diagram is explained below

a. Original demand for materials is done through purchase requisition, coming from production, admin/finance, maintenance and quality control departments etc. The purchase requisition been sent to the purchasing department must be specific on quality, quantity and delivery requirements.

b. Purchase order based on the information contained in purchase requisition to the suppliers as well as agreed cost and the date of delivery, purchase order is based on the supplier and should define the required goods or services.
c. **Delivery invoice** - this is the document use to show the details about the goods supply. It is issued by the supplier to the goods receiving Department of which this will be used as a basis of comparison with purchase order by the department, so as to know whether the goods meet up with the requisition.
d. **Goods receiving note** - This is issued by the goods receiving department, to authenticate that supply was received. It is an important document and at the same time basis for payment preparation of those received goods.
e. With the inspection, goods are sent to the stores who in turn raise the bill of inspection and send it to the purchasing department.
f. The purchasing department will thereafter raise an invoice with the inspections report, send it to account units that raise the cheque for payment to the suppliers.

4.6 Store Keeping

Store keeping involve preserving items until they are needed. Store keeping is an important function and make a substantial contribution to efficient operations. Store keeping include the following activities.

a. Issuing of required materials, tools etc. in a speedy manner and with efficiency.
b. Logical organisation of storage items, thus ensuring items can be found speedily
c. Receipts of materials from goods reception (external items) and from production (internal items)
d. Keeping comprehensive records of all items in the stores all times.
e. Observing the stock levels closely to advise purchasing department on fresh supply when required.
f. Organizing stock checks either on a periodic basis or a continuous basis to give accurate stock figures when required.
g. Ensuring that stores items are protected from damage and deterioration
h. Securing store from pilfering

4.7 Types of Storekeeping

There are two basic methods of store keeping namely centralised and decentralised

4.7.1 Centralised Storekeeping

Centralised storekeeping is an arrangement where there is only one main store with full responsibility of handling of stores.

Merits

1. Lower stock is maintained on average with amount of capital invested in stock
2. There is less risk of duplication.
3. High quality staff may be usefully employed
4. Closer control is possible on a central store.
5. Better supervision is possible as the focus will be on one store department.
6. Better security arrangement is possible to preserve pilferages.
7. Reduce clerical costs and economy in records and stationery.
8. Stocking is facilitated.
9. Likelihood of use of better equipment for housing stores.
10. Fewer obsolete articles are maintained.

Demerits

1. Less convenient from outside branches or departments.
2. Increase transportation cost in carrying materials.
3. Longer delay is possible in getting materials to distance departments.
4. Possible loss of local knowledge
5. In case there is fire or any other disaster, there will be greater risk of loss.
6. Breakdown in transportation might cause production stoppage in the branches outside the central storage.

4.7.2 Decentralised Storekeeping

Decentralised storekeeping is an arrangement where apart from central store there are other subsequent or departmental stores.

Merits

1. It brings about convenience to other branches because there will not be need to wait for production materials.
2. If there is unexpected disaster like fire or any other disaster occurred there will not be too much loss, compare to when centralisation store method is used.
3. Possible increase in local knowledge among senior and junior staff.
4. It enhances production of goods or services.
5. It creates room for employment.
6. Need for stock replenishment are detected and alerted at the right time.
7. Span of control possibly effective and efficient.

Demerits

1. Too much store might likely be maintained which will definitely increase cost of capital.
2. There is complete possibility for duplication.
3. More cost will be incurred on clerical cost.
4. There are absolute rooms of staff compared among themselves which definitely led to pilferage.
5. Closer control is not possible, compared to that of centralisation system.
6. There is need for more investment in machinery and other equipment, to keep the stock relevant and useful.

4.8 Store Keeping Documentation

The store department must keep records of all goods received into store and of the physical issues of materials from the stone.

The main documents that are used for materials control are the following:

a. Material Requisition Form
b. Material Return Note
c. Material Inspection Note
d. Bin Card
e. Store Ledger Card (Account)

4.8.1 Material Requisition Form (MRF)

This form is used by a department, section or unit or request for materials in the store. This is an important document for both storage control and cost ascertainment in virtually all cost accounting systems. This document is usually raised in three copies. One copy will be retained by the originator and the other two copies are sent to store department to allow authorised withdrawal of goods from the store, of these two copies, the store department will retain one to up-date their own records and having completed the quantity issue section, send the other copy to the store ledger section. Here, the material will be priced, and the copy will be used to update the relevant store card before being forwarded to the cost account section. It is this section that will charge the relevant department, unit, product, job or process with the value of materials issued, using the stock valuation system of the organisation. The same document will also be used to update the balances in other relevant ledger accounts.

DANGOTE CEMENT PLC MATERIAL REQUISITION FORM

No……………………………

To:

Date……………………………

The store manager — Job No………………………

Pleas issue materials — Prod. Order No…………….

To…………….…………….Department.

Item No	Description	Quantity	Rate	Cost Office		
				Unit	Amount	Stores

Authorised by ………………………. Date …..……….. Priced by……………. Date………….

Storekeeper ………………………. Date …..……….. Calculation/checked by…………

Received by.………………………. Date …..……….. Posted to…………………..………….

Bin Card No ……………………………………………………

The specimen MRF above can be modified to suit the specific needs of an organisation. It is normally the storekeeper's responsibility to ensure that the requisition is properly authorised and accurately completed, after which the materials are issued column to arrive at a reduced balance and the account of the appropriate job or cost centre is to be debited.

4.8.2 Material Return Note (MRN)

This is a document which records the return to store department of surplus materials no longer required by the cost centre. MRN can be virtually identical design to the MRF but coloured differently. The various materials records and cost accounts are to be adjusted to ensure that the cost centre concerned receives credit for the materials returned while the store account is debited for the returned materials.

DANGOTE CEMENT PLC MATERIAL RETURN FORM

No………………………

To:

Date……………………………

The store manager — Job No………………………

Pleas issue materials — Prod. Order No…………….

To……………….……………Department.

Item No	Description	Quantity	Rate	Cost Office		
				Unit	Amount	Stores

Authorised by ………………………. Date …..……….. Priced by……………. Date………….
Storekeeper ………………………. Date …..……….. Calculation/checked by…………
Received by.………………………. Date …..……….. Posted to………………….………….
Bin Card No ………………………………………………………

4.8.3. Material Inspection Note (MIN)

This is the document that is used when materials are delivered, a supplier's carrier will usually provide a document called "Delivery note or delivery advice" to confirm the details of materials delivered. When materials are unloaded, the storekeeper checks the materials unloaded with delivery advice after which the storekeeper prepare material receipt note a copy is given to supplier's carrier as evidence of delivery. After receipts of the materials the inspection department thoroughly inspects whether the quality of materials is in accordance with the purchase order and the quality of material received and it prepares a note called "Material Inspection Note" copies of which are sent to the suppliers and store department.

CHI LIMITED MATERIAL INSPECTION NOTE

Purchase Order No…………………………………………Date……………………………..
Inspection Note No………………………………………..Date.……………………………..
Material Receipt No………………………………………...Date.……………………………..

S/N	Description	Quantity	Reason for Acceptance/Rejection

Authorised by……………………………………....
Inspected by……………………………………....

4.8.4. Bin Card (BC)

This is a document on which is record every transaction in respect of each item of materials, after the physical receipt or issue. A bin card is normally attached to the bin, drawer or shelf in or on which each individual material is stored. It provides a running record of receipt and issues in the simplest possible form. An entry will be made at the time of each receipt or issue and a new balance will be determined. The bin card records the unit or quantity issued or received into store and not the cost value. For each item, on the bin card, the maximum, the minimum and the re- order levels as well as the order quantity should be reflected. This is more so in organisations where the store department initiates purchase requisitions.

PORCELAIN MANUFACTURE LTD

Maximum stock level……………………….………………..Manufacture Code……………..
Minimum sock level…………………………………………Description………………………
Order level…………………………………………………………………………………………
.

BIN CARD

RECEIPTS			ISSUES			BALANCE		AUDIT	
Date	GRN No	QTY	DATE	MRF	QTY	QTY	BAL	DATE	INITIALS

The specimen bin card above can be adjusted to suit the specific needs of an organisation.

4.8.5 Store Ledger Card

This is the key to an effective materials control system as it provides the details necessary to ascertain material values and for the checking of physical stock of materials. For materials control to be efficient and effective there must be minimum delay between the physical movement of materials and their recording in the card. For the re-ordering routine to operate efficiently, it is necessary to take account of the number of materials on order and the existing physical materials held.

ROBERK ROLLING MILL
Description…………………………………………………..….   Code No…………………..…
Re-order Level………………………………………………   Pricing Method…………….
Re-order Quantity…………………………………………………
Maximum Stock Level…………………………………………………
Minimum Stock Level…………………………………………………
STORE LEDGER CARD

ORDERS				RECEIPTS				ISSUE				BALANCE	
Date	Sup	POF	QTY	GRN	Qty	Rate	Value	MRF	Qty	Rate	Value	Qty	Value

Figure 11 A specimen of store ledger card

The receipts are entered from the goods received notes (GRN). The issues are entered from the Materials Requisition Form (MRF). The orders are entered from the Purchase Order Form (POF).

4.9 Relevant Stock/Inventory Management Terms

Any management team that hopes to succeed must, as a matter of necessity pay special attention to material. The objective of stock management is mainly to avoid economic consequences. The relevant stock or inventory management terms include the following:

1. **Stock-out:** This can be defined as a situation where an organisation has insufficient materials required for production. The economic consequences of such a situation are mainly:
    a. Machines are left idle and some of them may develop technical problem such as rusting, corrosion etc.
    b. Workers are paid for the period of idle time so that they will remain stand-by for commencement of production on arrival of materials.
    c. Customers supply may be interrupted, and they may look for alternative source.
    d. A long delay in the supply of the material may lead to complete liquidation of the business.
2. **Overstocking** - This is a term used to describe a situation where a business organisation maintains more than necessary material at any given time. One of the objectives of material planning is to ensure that such a situation does not rise. The economic implications of overstocking include:
    a. Capital is unnecessarily tied up due to the excess material.
    b. There is risk of obsolescence if material is not used up after a period of time.
    c. There is risk of deterioration, evaporation etc. particularly where the material is perishable in nature.
    d. Cost of storage is increased.

e. There is increased risk of theft of the material or careless usage of the material because of the erroneous notion by staff that material is surplus.

3. **Physical Stock-Taking** - This is a situation of counting items of store to ensure that the physical goods or materials in the store agreed with quantity in the store ledger card. At least, once in every year, it is recommended that every business organisation should undertake physical stock-taking of all the materials, work-in-progress and finished goods in the store. Every item of the stock is coded, and the weight or quantity counted and entered in the store ledger card including the value of the stock at cost. Physical stock-taking is usually taken by a committee appointed by management. Staff of internal audit unit, store unit, external auditors to the company and production units are of necessity included as members of the committee. Physical stock taking is usually carried out on work-free days (weekends or public holidays) to minimise stock movement.
4. **Continuous stock-taking** - In most large business organisation, it is practically impossible to organise physical stock - taking at any given date because of the volume of stock held. Such organisation may have well over twenty different types of materials and the volume of each group of materials is very substantial. The production cycle may almost be continuous, and workers are doing shiftwork. In such situation, it is difficult to have work-free days so as to carry out physical stock-taking. Where such circumstances prevail, management usually plans stock-taking on a continuous basis. The principle is that each type of material is physically counted at a time and the figure recorded. By so doing, stock-taking is carried on almost all the year round for different groups of materials. The figure recorded for each group of material is adjusted at the end of the year to arrive at the closing stock.

However, in both physical stock-taking and continuous stock-taking, there may be discrepancies in both stock ledger card and physical quantity available due to any of the following reasons:

i. Incorrect recording of quantities ordered, received and issued.
ii. Arithmetical errors of additions and subtractions of quantity received and issued.
iii. Losses due to evaporations, deteriorations, damages by rats and pests, corrosions etc..
iv. Theft particularly where the material is handy and expensive.
v. Material returned to stores but not documented.

It is usually better to make a physical check before a fresh stock is received so as to reconcile any discrepancies. At this point, the level of stock is usually low for the particular item of stock. This type of continuous physical stock-taking arrangement gives more credibility to the perpetual inventory control operation. In big organisations, where it is practically impossible to carry out physical stock-taking completely at any given time, a combination of perpetual inventory control and continuous physical stock-taking is advisable. At the end of the year, only selected items of the stock will be physically checked while the balances of other items are simply extracted from the bin cards.

Re-ordering Arrangements - Each item of stock must as a matter of necessity is controlled to avoid overstocking or stock out. There are many factors to be considered for inventory control and they include the following:

i. **Product Demand** - The demand for the finished products of the organisation is the fundamental guide towards the determination of the quantity and timing of materials supplied. The material control is generally geared towards attaining the demand of the company's goods or services. The demand of the organisation's product can be obtained by accurate sales statistics or test runs in case of a new company.
ii. **Lead Time** - This is the time taken between the placing of an order and the receipt of the materials. Depending on the nature and source of the materials, there is always a time lag between the day materials are ordered and the day they will be available for use. Where a material is sourced locally it may take between one to thirty days whereas the lead time for imported materials may range between one month to twelve months. This time lag shows the importance of lead time in planning material procurement in any organisation. Lead time which is sometimes called Procurement Finance or Re-order period.
iii. **Re-order Level** - This is the level to which the materials stock level is to be allowed to fall before an order for further supplies is placed. Each item of stock must have its own re-order level, for effective stock control, management must watch stock level closely to know not only the quantity to order but also the timing of the supply. Reorder quantity largely depends upon the lead time and consumption rate during lead time. The re-order level sometimes is referred to as Trigger-level and lies between maximum stock level and

minimum stock level Re-ordering arrangement is usually made by the buying department as stock approaches re-order level.

However, depending on the type of stock, a standing order may be given to supplier to make regular supply or monthly or quarterly basis X maximum lead time. It is given by maximum usage.

iv. **Maximum Stock Level** - This is the upper level of the inventory and the quantity that must not be exceeded without specific authority from the top management of the organisation. Maximum stock level is usually a part of the management policy after considering other inventory factors such as:

- Rate of consumption of the stock in question.
- Problems associated with the supply of the material e.g., scarcity or delay in delivery.
- Availability of capital for the specific stock.
- Risk of obsolescence and deterioration.
- Storage space and holding costs e.g., Air conditioning, heating, chemical etc. It is given by Re-order level + EOQ - (minimum Usage X Minimum Lead Time).

Illustration 1

The following data were extracted from the record of Kanuga Manufacturing Limited, for a period

Average Usage	1,000 units per day
Minimum	Usage 600 units per day
Maximum Usage	1,300 units per day
Re-order Quantity (EOQ)	50,000 units.
Re-order period	25 to 50 days.

Required:

Determine the following for the company:

a. Maximum stock level
b. Minimum stock level
c. Re-order level
d. Average stock level

Suggested Solution 1

Kanuga Manufacturing Limited

a. Re-order level = Maximum usage × maximum Lead Time

= 1300 × 30

= 39,000 units

b. Maximum Stock Level = Reorder level + EOQ - (minimum usage x minimum Lead Time)

= 39,000 + 50,000 - (600 x 25)

= 89,000 -15,000 = 74,000 units.

c. Minimum Stock Level = Reorder level - (Average usage x Average Lead Time)

$$= 39{,}000 - \left(\frac{1000 \times 25 + 30}{2}\right)$$

= 39,000 - 27.500 = 11.500 units

d. Average Stock Level = $\frac{Maximum\ Stock + Minimum\ Stock}{2}$

= $\frac{74{,}000 + 11{,}500}{2}$

= 42,750 units

Illustration 2

FESTUS LTD, as the following statistics were extracted from the store records of its shoe factory for the past six years.

Normal (average) usage	500 units per day
Maximum usage	600 units per day
Minimum usage	400 units per day

Lead time/Re-order period:

Maximum	50 days
Minimum	40 days

Economic Order Quality (EOQ) 50,000 units

You are required to compute the following stock level for management confirmation.

a) Reorder level b) Minimum Stock level

c) Maximum Stock level d) Average Stock level

Suggested Solution 2

Festus Ltd

a. Re-order Level = 600 × 50 = 30,000

b. Minimum Stock Level - 30,000-(500 × 45) =7,500 units

c. Maximum Stock Level = 30,000 + 50,000-(400 × 40) = 64,000 units

d. Average Stock Level = 71,500 = $\frac{35,750}{2}$

v. **Minimum Stock Level** - This is the lowest level of the stock that is established by management. It is arrived at after considering the lead time and the demand for the materials. Whenever stock falls down to this level, management has to ensure that supply arrangements are made to avoid stock-out problems. It is given by re-order level (Average usage X Average Lead Time).

vi. **Re-order Quantity or Economic Order Quantity (EOQ) -** This is the quantity of materials an organisation will purchase at a time to enjoy economic of scale i.e. transport cost, bulk discount, ordering cost, holding cost etc. for example if by ordering 1000 units of materials, an organisation will get a bulk discount of 10% and if the 1000 units will fully load a lorry to transport the materials from Lagos to Ibadan, it will be unwise for the organisation to purchase only 600 units and lose the 10% bulk discount and pay exactly the transport fare for 1,000 units to transport only 600 units.

Again, depending on the nature of material, if the holding cost of the material in the store is high depending on the quantity, then holding of 1000 units may be too high that the gains made from bulk purchase and transportation may be lost to the holding costs, rills shows that where a company buys in large quantities depending on the nature of materials, it gains through bulk discounts and transportation cost and loses through high holding cost. If the organisation purchases are made in small quantities it gains through low holding cost, but frequent ordering of the small quantities will create high ordering cost.

Economic order quantity can then be seen as the quantity to order at any given time in order to have a balanced effect of ordering costs, holding costs and other costs associated with inventory.

It is given as $\sqrt[2]{\frac{DoCc}{Ho}}$

Where	D	=	Annual Demand
	Co	=	Cost of ordering per order
	Ho	=	Cost of holding per unit per annum

vii. **Safety Stock or Buffer Stock-** This is an additional stock held by an organisation over and above the minimum stock. This provision is made against some errors in the demand estimate for the stock or abnormal delays in the lead time. For example, where an organisation has an unexpected contract, it may be forced to increase its production which will automatically reduce the level of stock within a very short time. Where adequate provision of safety stock is not made to take care of such emergencies the organisation may experience stock-out. The size of the safety stock usually depends on previous experience of demand discrepancies and supply disruptions.

Illustration 3

James & Tom normally purchase a total of 20,000 of materials per annum. Ordering cost per order is ₦32 and unit purchase of ₦10 is fixed by the price control board. Annual Stock carrying cost per naira is 80k.

You are required to evaluate

i. Economic order quantity (EOQ)
ii. Number of orders per year
iii. Total carrying cost of inventory
iv. Total material cost per year

Suggested Solution 3

SPTS Enterprises

1. EOQ = $\sqrt{\frac{2DC0}{H0}} = \sqrt{\frac{2\times 20{,}000\times 32}{0.80\times 10}}$

   EOQ = 40 units

2. Number of orders per year $\frac{Annual\ Demand}{EOQ} = \frac{20{,}000}{400} = 50\ orders$

Total carrying cost = $\frac{EOQ \times Ho}{2} = \frac{400}{2} \times 8 = ₦1{,}600$

3. Total material cost per year:

	₦
Carrying cost	1,600
Holding cost	1,600
Material cost	203,200
	203,000

4.10 Material Pricing

In inventory management, the prices paid to supplier for items purchased are extracted from the purchase invoice. There are a number of factors to be considered in valuing materials issued for use from the store. Where purchase prices are constant over a long period and there is no variation in quantities purchased, there would be little or no difficulty. In practice, prices fluctuate due to a number of reasons such as inflation, changes in commodities prices, buying from different sources, differences in quantity discounts etc. it is clear that there may be a number of identical materials in the store bought at different prices, when one of these materials is issues, it is necessary to determine the price at which it should be charged.

However, there are other cost which are directly or indirectly associated with the inventory which need to be analysed because they are necessary in formulating future inventory management policies. The costs associated with inventory are many and they can be grouped as discount, ordering costs and carrying costs.

1. **Discounts**

These are strategies employed in marketing to stimulate trade. There are different types of discounts each designed to attract a particular group of customers. The major types of discounts are discussed below:

a. **Trade discount:** A trade discount is an allowance granted to the customer by the seller for his patronage. In commerce, it is seen as a discount given to the retailer by the whole seller so as to enable him makes profit
b. **Quantity discount:** This is an allowance made by the seller to the buyer for purchasing items up to a particular value or quantity.

c. **Cash discount:** This is used in business to encourage prompt payment for items purchased. Customers always prefer to get cash discount so as to pay less for items purchased.

2. **Ordering Costs**

These are costs of obtaining stock such costs are incurred from the time the order is placed to the time the items are received into the store. The costs include:

a. Clerical costs of writing the purchase order, documentation by the receiving department, inspection department and other administrative costs.
b. Transportation costs where the price charged by the suppliers does not include cost land, rail or air transportation.
c. Charges made by suppliers for non-returnable containers such as bags, boxes, cases etc.

3. **Carrying Costs**

These are costs incurred in the process of preserving inventory at any given level in the store. Such costs include:

a. Interest on capital invested in the purchase of the stock.
b. Salaries paid to store officers, cost of training, retraining the store officers.
c. Special condition for different items of stock such as heating, refrigeration, air conditioning, special chemicals, insecticides etc. and maintenance of store equipment.
d. Auditing fees and stock-taking costs paid to professionals particularly at the end of each financial year.
e. Cost of insurance and security for items of stock against theft and robbery.
f. Normal loss as a result of deterioration, obsolescence, evaporation, damages etc.

4.11 Objective of Material Pricing

Materials constitute a substantial investment in most organisations. This makes it very necessary to ascertain accurately the value of materials used.

The objectives of materials pricing are:

i. In manufacturing organisation, the current pricing of materials is necessary to arrive at the total or unit cost of products manufactured.
ii. To ascertain the amount to be charged to individual cost centres on a consistent and realistic basis for purposes of performance evaluation.
iii. To provide a consistent and reliable basis for stock valuation at the end of the financial year.

4.12 Pricing Materials Issued and Valuation of Stocks/Inventory

It prices were stable; cost accountants would not be worried about the prices attached to materials issued to production or end of the year stock. Changes in the prices paid for the same materials at different times have created complicated problems to accounting profession in pricing of materials issued to production.

The problems associated with pricing issues involve:

i. Rapid changes in prices for materials and components purchased.
ii. Stock issues are usually made up of several deliveries which may have been made at different prices.
iii. It is difficult to identify the items with the prices they were bought because they are mixed up.
iv. In manufacturing organisation, material pricing method may lead to over or under estimation of profit. There are many methods of pricing material issued from store and each method as its merits and demerits.

The ones commonly seen in practice include:

1. First in First Out (FIFO)
2. Last in First Out (LIFO)
3. Simple average price (SAP)
4. Weighted Average Price (WAP)
5. Standard Price (SP)
6. Current Market Price (CMP)
7. Inflated Market Price (IMP)

8. Highest in First Out (HIFO)
9. Next in First Out (NIFO)
10. Base Stock Method (BSM)
11. Replacement Price or Market Price Method

It is necessary to note that each of these methods gives a different result from one another.

4.12.1 First in First Out (FIFO)

This method assumes that the first batch of materials that come into the store should be issued to production before the second batch.

Using this method, issues are prices at the oldest batch in stock until all the batch has been issued when price of the next oldest batch is used and so on.

It is very practicable where the batches can be identified whether they are issued to different jobs or different departments. To facilitate this identification, the materials will be such that their location is unique so that new supplies are not placed on top of earlier supplies.

However, the logic of FIFO method is that where it is not possible to use the materials according to the sequence of supply, the unit price of the first batch will be charged to any of the identical materials issued until the number of units carrying the price in the first batch is exhausted.

Merits

1. It is an actual cost of purchase of that batch
2. It is a good representation of sound keeping practice where the oldest items are issued first
3. Stock valuation is based on the more recently acquired materials and thus near current market value.
4. Since it is not based on estimate, it does not give rise to over or under estimation of profit
5. It is acceptable to the tax authority

Demerits

1. Production cost being based on the oldest material price lag behind current condition. This is more pronouncing during period of inflation.

2. It is administratively clumsy, because of the need to keep trace of each batch.
3. Renders cost comparisons between job and material issue price.

4.12.2 Last in First Out (LIFO)

This method assumes that material issue is charged out at the price of the most recent batch received and continue to be charged thus until a new batch is received.

The principle behind this method is that the price paid per unit for the last supply will be charged to the materials issued next to production.

Merits

1. It is actual cost of the material issued to production.
2. Production tends to be based fairly close to current prices and therefore more realistic.
3. Old stocks are valued at oldest prices which are in agreement with the concept of prudence.
4. It helps to reduce the problem of profit over estimation in period of rising prices.

Demerits

1. It is administratively clumsy because it results in many batches, using only part charged to production where another batch is received.
2. Production cost being based on the oldest material price, lag behind current condition.
3. It renders cost comparison between jobs difficult.
4. It is not acceptable to tax authority.
5. Where materials are not frequently replenished, it may not be a good representation of current market price.

4.12.3 Average Price Method

There are two types of average price method namely simple average method and weighted average method.

Simple Average Method

This is an average of prices without any regard to the quantities involved. It is calculated by taking the total of the prices paid for different batches supplied and dividing the sum by the number of batches which now gives the average cost per unit. This method is satisfactory only where prices do not fluctuate much, and stock value is relatively small.

Weighted Average Method

This is a perpetual weighted average system where the issue price is calculated after each receipt taking into account quantities and money value. It is calculated by weighted cost of the material over period divided by the total number of units of the materials supplied. The profit figure and stock valuation based on weighted average is more reliable than the figures based on simple average method.

Merits

1. It is realistic; however, it is not actual buying price.
2. It is acceptable to tax authority.
3. It has an effect on both productions cost as well as stock valuation.
4. It makes comparison between jobs, using similar materials easily

Under constantly fluctuating purchase prices (i.e., inflation) the method is likely to give more satisfactory results than FIFO and LIFO as it tends to even out the price fluctuations.

Demerits

1. It does not represent actual price paid for any particular batch; therefore, it is only an estimate.
2. The issues prices often run into a number of decimal points and rounding up will be necessary.
3. Excessively high or low prices paid for the items previously bought and used are reflected in the computation of the current price simply because the items fell within a defined time period.

4.12.4 Standard Price Method

This is "a predetermined price fixed on the basis of a specification of a product or service and of all factors affecting that price" (ICMA terminology).

The implication of this method is that the price over period of time is planned, and all issues and returns are charged with the standard price irrespective of the actual cost.

Merits

1. It is very simple to apply since the calculation is straightforward for issue items and stock.
2. It reduces clerical job since only units of items issued is required to be recorded while the issue price is planned.
3. Where price of items issued are standardised, cost comparison between batches and periods can be made with ease.
4. It serves as a check to efficient buying policies.

Demerits

1. It is not the actual price (except by coincidence) over or under valuation of profit or stock may occur.
2. It is very difficult to set a standard price that will correspond with the actual price of stock that will be used in the preparation of cost estimates.

4.12.5 Replacement Price or Market Price Method

This method of price issue implies that at the date of issue of the material, the cost of the material as of that date will be ascertained and that cost will be charged to the batch issued out. It is, however, difficult to ascertain market prices whenever prices whenever issues are made, and different versions of this method is seen in practice.

Merits

1. It brings the issued price to current prevailing market price particularly at the period of inflation.
2. It helps management to be current with market prices for purpose of production planning and marketing strategies.

Demerits

1. It is not based on actual cost and therefore can give risk to over or under estimation of profit or stock.
2. It is not acceptable to tax authority.
3. It makes comparison between jobs or periods difficult.
4. It is difficult to use during frequent price fluctuation, estimates rather than real prices are used.

4.12.6 Inflated Price Method

The use of this method is complimentary to any of the other methods discussed. The materials issued under FIFO, LIFO etc.. will be loaded with certain amount to cover any known normal loss sustained.

It is not very accurate because it is not the actual cost, however, it tends to take into account such losses or expenses which will reduce the problem of profit overestimation.

4.12.7 Next in First Out

This method charges the materials issued with the price of highest price of identical materials in the store. The highest priced batch of material in the store serves as a standard price for the materials issued irrespective of the cost. This price charges if a new batch is supplied at highest cost. Where new supply carries lower price with it, the former higher price continues to be the standard price for material issue.

4.12.8 Base Stock Method

This method is relevant mainly to stock valuation. The principle behind this method is that management uses different parameters such as probability of scarcity of the material, unexpected contract etc.. to determine what quantity or volume of the particular material will be maintained in the store as Base Stock.

This base stock (buffer stock) is never issued to production and in most cases, the base stock is treated as a fixed asset. The stock is always valued at cost irrespective of when it was purchased. During stock taking, the base stock is valued at cost and any stock above the base stock is normally valued using any of the material issue method such as FIFO, LIFO etc. this method is not commonly used in costing but in financial accounting it has the advantages of reducing fluctuations in annual profit figures disclosed as a result of frequent price changes.

Illustration 4

The following figures are extracted from the store's ledger accounts of Igbesa Manufacturing Company in lyana-Obasanjo.

Jan 4	Received 1,000 units at ₦200 per unit
Jan 10	Received 260 units at ₦210 per unit
Jan 20	Issued 700 units
February 4	Received 400 units at ₦230
February 21	Received 300 units at ₦250 per unit
March 16	Issued 620 units
April 12	Issued 240 units
May 10	Received 500 units at ₦220 per unit
May25	Issued 380 units

You are to record the transactions using the following method at stock valuation.

a. First-In-First-Out (FIFO)
b. Last-In-First-Out (UFO)
c. Weighted Average Method (WAM)

Suggested Solution 4

a) Igbesa Manufacturing Company

First-in-First-Out (FIFO) Method of Valuation

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	Price N	Amount N	Qty	Price N	Amount N	Qty	Price N	Amount N
Jan 4	1,000	200	200,000				1,000	200	200,000
Jan 10	260	210	54,600				1,260		254,600
Jan 20				700	200	140,000	560		114,600
Feb 4	400	230	92,000				960		206,600
Feb 21	300	250	75,000				1,260		281,600
Mar 16				300	200	60,000			
				260	210	54,600			
				60	230	13,800			

				620		128,400			
April 12				240	230	55,200	400		153,200
May 10	500	220	110,000				900		208,000
May 25				100	230	23,000			
				280	250	70,000			
				380		93,000	520		115,600

b) Igbesa Manufacturing Company

Last-In-First-Out (LIFO) Method of Valuation

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	Price N	Total N	Qty	Price N	Total N	Qty	Price N	Total N
Jan 4	1,000	200	200,000				1,000	200	200,000
Jan 10	260	210	54,600				1,260		254,600
Jan 20				260	210	54,600			
				440	200	88,000			
				700		142,600	560		112,000
Feb 4	400	230	92,000				960		204,000
Feb 21	300	250	75,000				1,260		279,000
Mar 16				300	250	75,000			
				320	230	75,600			
				620		148,600	640		130,400
Apr 12				80	230	18,400			
				160	200	32,000			
				240		90,400	400		80,000
May 10	500	220	110,000				900		190,000
May 25				380	220	83,600	520		106400

c) Igbesa Manufacturing Company

Weighted Average Method of Valuation

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	Price N	Total N	Qty	Price N	Total N	Qty	Price N	Total N
Jan 4	1,000	200	200,000				1,000	200	200,000

Jan 10	260	210	54,600				1,260	202.06	254,600
Jan 20				700	202.06	141,442	560	202.06	113,158
Feb 4	400	230	92,000				960	213.71	205,158
Feb 21	300	250	75000				1,260	222.35	280,158
Mar 16				620	222.35	137,857	640	222.35	142,301
Apr 12				240	222.35	53,364	400	222.35	88,937
May 10	500	220	110,000				900	221.04	198,937
May 25				380	221.04	83,995	520	221.04	114,942
				80	230	18,400			

Illustration 5

On 1st July 2013, Madam Blessing Uloma started a small business of buying and selling yam tubers. She invested her pension saving of one million naira in the business.

During the six months ended 31st December 2013 the following transactions were recorded.

Purchases

Date of Receipts	Yam tubers	Amount
13 July	200	72,000
8 August	400	152,000
11 September	600	240,000
12 October	400	140,000
15 December	500	140,000

Sales

Date	Yam tubers	Amount
10 August	500	250,000
20 October	600	270,000
25 December	400	152,000

The yam tubers were stored in the premises of Madam Blessing Uloma and the physical stock as of 31st December 2019 were 600. Other expenses incurred and paid in cash during the period amounted to ₦58,000.

You are required to calculate the value of the yam tubers issued using First-In-First-Out pricing method and to calculate the value of closing stock of yam tubers during the period ended 31st December 2019, show the operating income statement for the six months period.

Suggested Solution 5

Madam Blessing Uloma

Last-In-First-Out (LIFO) Method of Valuation

RECEIPTS				ISSUES			STOCK BALANCE	
Date	Qty	Price N	Total N	Qty	Price N	Total N	Price N	Total N
13/7/19	200	360	72,000				200	72,000
8/8/19	400	380	152,000				600	224,000
10/8/19				200	360	72,000		
				300	380	114,000		
				900		186,000	100	38,000
11/9/19	600	400	240,000				700	278,000
12/10/19	400	350	140,000				1,100	418,000
20/10/19				100	380	38,000		
				500	400	200,000		
				600		238,000	500	180,000
15/12/19	500	280	140,000				1,000	320,000
25/2/19				100	400	40,000		
				300	350	105,000		
				400		145,000	600	175,000
May 25				380	220	83,600	520	106400

Mrs. Blessing Uloma

Operating Income Statement as of 31st December

	₦	₦
Sales (WNI)		672,000
LESS Cost of sales		
Opening Stock		
Add purchases	744,000	
744,000		
Less Closing Stock	(175,000)	
Cost of goods sold		(569,000)
Gross profit		103,000
Less expenses		(58,000)

Profit 45,000

Working

1. Calculation of Sales

			₦
10/8/2019	500 Yam tubers @₦500	=	250,000
20/10/2019	600 Yam tubers @₦450	=	275,000
25/12/2019	400 Yam tubers @₦380	=	152,000
			672,000

Illustration 6

Show the ledger entries as they would appear when using the following stock pricing methods:

i. FIFO (first in first out)
ii. LIFO (last in first out)
iii. Simple average method
iv. Weighted average method

Of pricing issues, in connection with the following transaction in year 2022

	Units	Price (₦)
July 1 Balance in hand 300	3.00	
" 2 Purchases	200	3.20
" 4 Issued	150	-
" 6 Purchases	200	3.15
" 11 Issued	150	-
" 19 Issued	200	-
" 22 Purchases	200	3.40
" 27 Issued	150	-

In the period of rising prices as above, what are the effects of each method? Calculate the price in 3 decimals places.

Suggested Solution 6

(i) STORE LEDGER ACCOUNT (FIFO METHOD)

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	N	N	Qty	N	N	Qty	N	N
July 1	300	3	900				300	3	900

“ 2	200	3.2	640				500		1,540
“ 4				150	3.2	480	350		1,040
“ 6	200	3.15	630				530		1,670
“ 11				150	3.0	450	400		1,220
“ 19				200	3.2	640	200		500
“ 22	200	3.4	680				400		1,260
“ 27				150	3.15	475.5	250		784.5

(ii) STORE LEDGER ACCOUNT (LIFO METHOD)

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	N	N	Qty	N	N	Qty	N	N
July 1	300	3	900				300	3	900
“ 2	200	3.2	640				500		1,540
“ 4				150	3.2	480	350		1,040
“ 6	200	3.15	630				530		1,670
“ 11				150	3.15	472.5	400		1,197.5
“ 19				50	3.15	157.5			
				50	3.2	160			
				100	3.0	300			
				200	3.2	790	200		407.5
“ 22	200	3.4	680				400		1,087.5
“ 27				150	3.4	510	250		577.5

(iii) STORE LEDGER ACCOUNT (SIMPLE AVERAGE METHOD)

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	N	N	Qty	N	N	Qty	N	N
July 1	300	3	900				300	3	900
“ 2	200	3.2	640				500		1,540
“ 4				150	3.1	465	350		1,075
“ 6	200	3.15	630				550		1,705
“ 11				150	3.15	468	400		1,081
“ 19				200	3.15	624	200		457
“ 22	200	3.4	680				400		1,137
“ 27				150	3.19	478.5	250		658.5

(iv) STORE LEDGER ACCOUNT (WEIGHTED AVERAGE METHOD)

RECEIPTS				ISSUES			STOCK BALANCE		
Date	Qty	N	N	Qty	N	N	Qty	N	N
July 1	300	3	900				300	3	900
“ 2	200	3.2	640				500	3.1	1,540
“ 4				150	3.1	465	350		1,075
“ 6	200	3.15	630				530	3.1	1,705
“ 11				150	3.1	465	400	3.1	1,240
“ 19				200	3.1	620	200	3.1	620
“ 22	200	3.4	680				400	3.25	1,300
“ 27				150	3.25	487.5	250		912.5

4.13 Stock / Inventory Valuation Decisions and Choice of Method

The summary of our calculation above shows that there is a great disparity of information disclosed in financial statement using different basis.

Different methods as discussed earlier have merits and demerits. In cost accounting, pricing issue based on actual cost is preferred, but generally, the decision on the choice of method to be adopted for stock valuation is arrived at after the following consideration:

a. **Consistency:** It is usual for business to have consistent accounting basis. This is necessary because if accounting basis are changed frequently, it becomes difficult for comparison to be made different period or between different organisations. A particular base may be adopted for purposes of consistency.
b. **Prudence:** Although the concept of prudence is strictly adhered to in financial accounting, in cost accounting, it is necessary to consider this concept particularly when the stock is obsolete or is a slow-moving item. It may be unwise for the cost accountant to adopt a basis which reflects a very high profit which cannot be substantiated through conversion to cash. The basis that should be adopted is that which reflects a reliable cost information to the management for purpose of planning and control of operations.
c. **Tradition:** Some traders or businesses may have a tradition of a particular version of stock valuation and may not be willing to change the approach.
d. **Convenience:** An organisation may adopt a particular method because of convenience. An organisation may be conscious that the method adopted may not be the best but accepts the method because it is convenient for the organisation.

e. **Tax consideration:** the tax laws may not allow the use of a particular method at different times or for different purposes. If that is the case, most organisation adopt some bases simply because of tax consideration. The tax basis adopted may not be the best for the organisation.
f. **Ignorance and lack of information:** Sometimes, because of experience or entrusting the job of inventory management to unqualified staff, proper stock records will not be kept. It then becomes difficult to use certain basis e.g., Average method, or a staff may adopt a method he knows simply because he is not conversant with other methods.
g. **Auditor's recommendation:** Occasionally, in the domestic reports, auditors may recommend a stock valuation method different from what was used previously. The organisation may decide to adopt the auditor's recommendation

4.14 Just-In-Time (JIT)

The earlier system describes under this section, (i.e., types of storekeeping) require keeping a level of inventory in the stores. This is a system whose objective is to produce or procure products or components as they are required by a customer or for office use, rather than for storage. A JIT system is a 'pull' system, which responds to demand, in contrast to a 'push' system, in which stocks act as buffers between the different elements of the system. There are two aspects to JIT systems. JIT purchase and JIT production.

JIT Purchase: This is a purchasing system in which material purchases are contracted so that the receipt and usage of material to the maximum extent possible from external supply. It means the material stock can be kept at zero level. However, the reliability of the supplier is important.

JIT Production, on the other hand works on a demand-pull basis and seeks to eliminate all waste and activities that does not add value to the production.

This is a production system which is driven by demand for finished products whereby each component on a production line is produced only when needed for the next state.

JIT system environment is characterised by each component on a production line is produced only when needed for the next stage. JIT system environment is characterised by:

(i) A move towards zero inventory.

(ii) Elimination of non-value-added activities.

(iii) An emphasis on perfect quality is zero defects.

(iv) Short set up.

(v) A move towards a batch size of one 100% on timely deliver.

(vi) A constant drive for improvement.

Revision Questions

Multiple Choice Questions

1. The most acceptable method of pricing stores issues for decision making
   (a)FIFO (b)LIFO (c)replacement cost (d)weighted average cost (e)average cost
2. One of the following is not a feature of a good coding system
   (a)uniqueness (b)clear symbolisation (c)distinctiveness (d)indexing (e)uniformity
3. Which of the following is not a reason why coding is necessary?
   (a)to identify unique items, materials and parts (b)to increase data storage (c)to avoid ambiguity (d)to aid processing (e)to reduce data processing
4. Which one of the following activities is not a holding cost under inventory control
   (a)interest or capital invested in stocks (b)deterioration and obsolescence (c)storage charges (d)transport charges (e)insurance and security
5. A firm has a high level of stock turnover and uses the First in First out issue pricing system. In a period of rising purchase prices, the closing stock valuation is
   (a)based on the prices of the first items received (b)irrelevant (c)the average of all goods (d)much lower than current purchase price (e)close to current purchases prices

Use the information below to answer questions 6 and 7

Economic order quantity	-	12,000kg
Lead time	-	20-28 working days
Minimum usage	-	400kg per day
Maximum usage	-	800kg per day

6. What is the re-order level?
   (a)23,800kg (b)22,400kg (c)24,000kg (d)32,000kg (e)40,200kg
7. What is the maximum stock level?
   (a)32,400kg (b)31,200kg (c)18,500kg (d)33,400kg (e)26,400kg
8. What is the maximum stock level?
   (a)32,400kg (b)31,200kg (c)24,000kg (d)33,400kg (e)26,400kg
9. A written request to initiate purchases in a firm is called? (a)purchase order (b)purchase requisition (c)receiving report (d)material requisition form (e)invoice

Use the information below to answer question 9 and 10

Vidic Ltd has a special component for its production process. Demand for the component is 100units monthly at a cost of ₦10 each. Cost per order is ₦400, while handling cost of stock is 10% of the cost of the components. Reorder period is 20 to 30days.

10. What is the re-order level?
    (a)250 (b)650 (c)980 (d)3,000 (e)3,500
11. What is the reorder quantity?
12. (a)250 (b)650 (c)980 (d)1,200 (e)1,580

Theory Questions

1. Explain the following terms:

A. Dormant stock B. Re-order level

C. Stock turnover D. Safety stock

E. Product demand

2. Merciful - Events Ventures specialises in the purchase and sale of cement. The purchase and sales of cement for the month or October are given below:

Date	Qty	Unity Price
October 3	560	1,350
October 10	350	1,390
October 16	200	1,370
October 26	400	1,360
October 28	300	1,395

On the 31st of October, 9 contractors came and purchase 1,680 bags at ₦1,455 per bag.

Use the following pricing methods:

a. First-In-First-Out (FIFO)
b. Last-In-First-Out (LIFO)
c. Simple Average Method (SAM)
d. Weighted Average Method (WAM)

3. The following information relates to the operations of Bukky Catering Services whose annual demand was 10,000 bags of flour. Stock carrying cost per naira is 40 kobo, while the purchase price is ₦5 per unit. The ordering cost is ₦16 per order. It was observed that the usage range per week is between 150 and 200 bags of flour. Also lead time for suppliers is between one week and three weeks.

Required to calculate

a. Re-order level
b. Minimum stock level
c. Economic order quantity
d. Given the following information for the month of July 2010.

	Qty Units	Unit Cost	Total Cost
Opening balance 1st	100	2.00	200
Receipts 3rd	400	2.10	840
Issues 4th	200	-	-
Receipts 9th	300	2.12	636
Issues 11th	400	-	-
Receipts 18th	100	2.40	240
Issues 20th	100	-	-
Closing balance 31st	200	-	1916

Required

Value the issues of materials and closing stock using Base Stock Method (Base stock units is 50 under FIFO).

CHAPTER FIVE

LABOUR COSTING

5.1 Learning Objectives

At the end of the chapter, the students should be able to know and understand the;

i. Meaning of Labour cost;
ii. Classification of Labour cost;
iii. Accounting for Labour cost;
iv. Meaning of Labour Turnover; and
v. Consequences of Labour Turnover.

5.2 Introduction

Labour is an essential factor of production. It is a human resource that participates in the process of production. Labour cost is a significant element of cost of a product or service. For the purpose of accounting labour costs are classified into;

i. Direct labour, and
ii. Indirect labour

Direct Labour Cost: The labour cost incurred on the employees who are engaged directly in making the product, their work can be identified clearly in the process of converting the raw materials into finished products is called 'direct labour cost.' For example, wages paid to the workers engaged in machining department, fabrication department, assembling department etc.

Indirect Labour Cost: The indirect employees are not directly associated with the conversion process but assist in the process by way of supervision, maintenance, transportation of materials, material handling etc. their work benefits all the items being produced and cannot be specifically identified with the individual products. Hence, the indirect labour cost should be treated as production overhead. These costs will be accumulated and apportioned to different cost centres on equitable basis and absorbed into product cost by applying the overhead absorption rates.

Items of Labour Cost: The labour cost can be analysed into the followings:

a. Monetary benefits payable immediately*:* Salaries and wages, dearness and other allowances, production incentive or bonus.
b. *Monetary benefit after some time in the future:* Employer's contribution to Pension etc. Gratuity, profit linked bonus.
c. *Non-monetary benefits (fringe benefit):* Free or subsided food, free medical or hospital facilities, free or subsidised education to the employees' children, free or subsidised housing etc.

5.3 Job Evaluation

Job evaluation is a procedure designed to rank jobs on a formal basis and to measure the worth of a job for compensation purposes in relationship to other jobs. It requires written detailed description of work operations encompassed by each job. The descriptions are used to rate jobs according to such facts as skill, responsibility, effort and conditions. The ratings employed to group particular jobs into labour grades with associated pay brackets. It is basically a control procedure established to prevent wage inequities. It is an analysis cost of human effort and its resultant payoff to an organisation. It is a technique of determining the relative worth of jobs i.e., relative position of one job to another job in the organisation. It provides management with a reasonably sound basis for determining he basic internal wage and salary structure for various job positions and ensures that these differentials are consistent and equitable.

Advantages

a. It simplifies wage administration by bringing a uniformity in wage rates
b. A more rational wage and salary structure is set up by making an objective ranking of jobs and simplifies wage administration.
c. It is reasonably effective within an organisation at ranking jobs, particularly low-level ones.
d. The new jobs will be brought into the wage structure at the level indicated by the relative worth of existing jobs.
e. The resulting rates for similar skills will be par with the those paid by other organisations in the same region.

f. It helps in drawing clear lines of authority and responsibility for administrative convenience.

5.3.1 Job Evaluation Methods

The methods used in job evaluation are given below:

1. **Job Ranking Method:** Under this method, various jobs are evaluated and ranked according to difficulty in performance and responsibilities. It is a method of an informal arrangement of a hierarchy of jobs from lowest to the highest or on the reverse order. It starts with recording job descriptions and specifications and comparison of different jobs taking into consideration, the skill, education responsibilities, hazards etc and ranking is made by comparison of the job with the same components of another job. After ranking each job, they will be put in ranked scale of jobs.
2. **Grade Description Method**: This method is a variant of job ranking method. Under this method, predetermined number of grades or classes are established on the basis of education, experience, skill, responsibilities etc and the jobs are placed in suitable grades or classes. The jobs within the grade should be approximately of similar nature. This method requires an adequate description of each grade to classify all jobs according to their grades or classes.
3. **Factor Comparison Method:** Under this method, a few key jobs are selected and are used in creating a rating scale by evaluation and ranking all the key jobs according to each of the factors. Job comparisons are based on analysis of five factors (a) Mental requirements (b)Skills (c) Physical requirements (d) Responsibility and (e) Working conditions. These factors should be compared with the jobs to be evaluated to see if they are appropriate, the wage rate is divided into the amounts being worth payable for each of the factors and a factor scale is constructed. By comparing job specifications written in the factor comparison manner with those for the key jobs, remaining jobs may be classified with relative case to arrive at the wage rate payable to those jobs.
4. **Point Rating Method:** Under this method, jobs are broken into component actors like education, experience, skill, responsibility, mental requirements, physical requirements etc. each of these factors is given a relative weightage and points are allotted. The jobs are ranked in the order of points scored and are placed in the number of predetermined grades.

A job's place in the scale indicates a number which when added to numerical values indicate the relative worth of the various jobs being considered, basing on which pay scales are fixed for each of these grades. The evaluation of factor points is based on the exercise of human judgement.

5. **Merit Rating:** Merit rating is concerned with the evaluation of individual employee. It is a technique used to rate an employee's performance to assist in determining whether a person should receive a merit award, promotion, demotion etc. In merit rating an individual worker's certain characteristics like attendance, co-operation, discipline, acceptance of responsibility, integrity, honesty, intelligence, skill etc are assessed to measure the worth of individual worker. It is an evaluation of individual performance on the job in terms of job requirements. It is an assessment of individual performance on system basis and the scope for bias is eliminated while evaluation. Merit rating provides a scientific basis for determining fair wages for each worker based on his ability and performance.

5.4 Studies at Work Place

5.4.1 Time and Motion Study

Time study is a technique designed to establish the time for a qualified worker to carry out specified elements under specified conditions at a defined rate of working recorded by direct observation of the times using a time measuring device and the ratings for individual elements. Time and motion study is a technique for recording the times and rates of working for the elements of a specified job carried out under specified conditions, and for analysing the data so as to obtain the time necessary for carrying out the job at a defined level of performance. The main objective of the study is the development of standard time which is normally defined as the time required by an 'average worker' working at 'normal place' to complete a specified task using a 'specific method.' The possession of exact knowledge through time study helps top eliminate waste, minimise costs.

5.4.2 Method Study

Method study is concerned with how things are done and is aimed quite simply at finding better ways of doing things. There are five ways that methods can be improved: (a) Eliminate unnecessary tasks (b) simplify the process (c)combine tasks, (d) re-arrange task, and (e) reduce the number of operations. Method study is usually undertaken in the following stages:

1. The area of study is defined. This will be determined by cost/benefit considerations.
2. Information is gathered by observing and interviewing employees. Flow charts and management reports are analysed.
3. Alternative methods of performing work re considered. This process involves analysing current methods used and the following questions are asked:
    - (i) Is the job and all aspects of it necessary?
    - (ii) Is the best equipment used?
    - (iii) Are controls adequate?
    - (iv) Do bottlenecks and idle time occur?
    - (v) Is the standards set for the job acceptable?
4. The best alternative is developed and installed
5. Feedback is obtained and progress is monitored

Method study is the critical study of existing and proposed ways of doing work as a means of developing and applying easier and more effective methods and reducing costs.

5.4.3 Work Study

Work study, in its broadest sense, is the application of systematic analysis to the work of men and machines so as to improve methods and to establish proper time values for that work. The objectives of work study are: (a) The most effective use of plant, (b) The most effective use of human effort, (c) A reasonable workload for those employed. Work study investigates every aspect of existing or proposed work in order to find the best way of performing tasks. It involves setting standards and solving problems which include bottlenecks, low morale large amounts of defective work and low productivity. Work study is comprised of methods study and work measurement. Work study is a general term for those techniques (especially method study and work measurement) that are used in the examination of human work, and which lead systematically to the investigation of all factors affecting the efficiency of the situation being reviewed as a basis for making improvements.

5.4.4 Activity Sampling

In activity sampling, a number of successive observations are made over a period of time of one or a group of machines, processes or works. Each observation records what is happening at that instant and the percentage of time during which that activity or delay occurs. Activity sampling is a technique in which a large number of instantaneous observations are made over a period of time, of a group of machines, processes or workers.

5.4.5 Work Simplification

Work simplification is a technique for analysing operations and procedures with a view to finding easier ways of performing the work involved.

The labour remuneration methods, plans and systems are broadly classified into three categories as given below: (a) Time Rate Methods (b) Piece Rate Methods, and (c) Group Bonus Plans. Each of the above categories is discussed in detail in the next paragraphs.

5.5 Remuneration Methods

There are two basic remuneration methods:

i. Time based method
ii. Output based method

In time-based wage payment system, standard time is predetermined, and the efficiency of each individual worker is assessed to compensate them for higher efficiency in work as compared to standard time set.

5.5.1 Suitability of Time Rate System

This method can be suitably applied in the following circumstances:

a. Where the output of an individual worker cannot be measured reasonably
b. Where the work is required to be closely supervised
c. Where the quality of work is more important
d. Where output of an individual worker is not in his control
e. Where increase in output is negligible compares to the incentive

Advantages

i. It is commonly recognised by all trade unions as well as workers.
ii. It is a guaranteed income assured to the workers.
iii. It is very easy to understand and simple to calculate the earnings of workers.
iv. It involves less clerical work and detailed records are not necessary.
v. Since the production is not the criteria for calculation of wages, tools and materials are handled carefully. Wastage is also minimised.

Disadvantages

(a) Labour cost may rise due to decrease in productivity, thereby decreasing profit.
(b) Production may decrease thus upsetting production schedules, create production bottlenecks and increase cost of production per unit.
(c) It may create idle time.
(d) The payment is not linked to production; this system encourages inefficiency.
(e) It does not encourage initiative.
(f) Standards for labour are difficult to set.
(g) It requires close supervision resulting in increase in supervision costs
(h) Labour cost cannot be accurately estimated for the purpose of cost estimations and quotations

5.5.2 Flat Time Rate Method

Under this system the worker is paid on hourly, daily or weekly wage rate and his remuneration is based on the time spent for production and wages are calculated as follows:

Wages = Hours worked x Hourly wage rate

For example, if the hourly rate is ₦12 and a worker has worked 42 hours in a week, his weekly wages are:

Wages = 42 hours x ₦12 per hour = ₦504

In an organisation where quality is given priority or if it is difficult to measure the production on time basis, this method is more appropriating. But this will not give consideration to hard, sincere and skilful work.

5.5.3 High Day rate System

Under this method, employees are paid a high hourly wage rate than the rate paid at different organisations in the industry or region expecting that the workers will work more efficiently. To implement this method, the efficient, skilled and experienced workers are selected expecting an efficient and hard work from them in expectation of that the organisation will pay wages at higher rates than prevailing in the industry.

Wages = Hours worked x High day rate

For example, the normal wage rate prevailing in the other similar companies is ₦12 per hour, X Ltd has adopted high rate of ₦15 per hour. A worker who worked for 42 hours in a week will be paid as under:

Wages = 42 hours x ₦15 = ₦630

The supervision cost will reduce under this method and there will be reduction in overall labour cost per unit. The main drawback is that there is no guarantee that high day rate system will act as an incentive. The high wages may become the accepted level of pay for normal working and supervision may be necessary to ensure increased productivity and units' cost would rise. Another disadvantage is that the workers will get only fixed hourly rate for their effort, and it will not act as an individual incentive for extracting efficient and more output from him. Sometimes, this wage plan is used as an incentive to achieve present targets and problem arises if the anticipated production targets are not achieved.

5.5.4 Different Time Rates

Under this method, different time rates are fixed for different efficiencies and skills. Normal wages are paid up to the level of standard efficiency and increase in efficiency, will be paid at graduated scale of payment.

For example, wages are paid according to skills of the workers as given below:

Grade	Types or workers	Wage rate per hour ₦
A	Skilled workers	8.00
B	Semi-skilled workers	7.00
C	Unskilled workers	6.00

This method of wage payment is also not popular due to its complication in computation of earnings.

5.5.5 Halsey Premium Bonus Plan

Under this method, for each unit or job a standard time is calculated and 50% of the time saved is allowed as bonus. The time rate paid for the time taken plus 50% of the time saved, if the job is completed in less than the standard time, and time rate is guaranteed. The total wage of a worker is calculated as follows:

Total wages = (Time taken x Hourly rate) + [1/2 x Time saved x Hourly rate]

Illustration 1

A worker is allowed 60 hours' time for completion of the job and the hourly rate is ₦4. The actual time the worker worked was 40 hours. Calculate the wages of worker under Halsey plan.

Time saved = Time allowed – Time Taken = 60 hours – 40hours = 20hours
Total wages = (40 hrs. x ₦4) + [1/2 x 20 hrs. x ₦4)] = ₦160 + ₦40 = ₦200

5.5.6 Rowan Premium Bonus Plan

Under this method, a standard time is calculated for every job or process and a bonus is paid upon the time saved calculated as a proportion of the time taken which the time saved bears to the time allowed. In contrast of Halsey plan, instead of a fixed percentage of time saved, bonus is in the proportion of time saved to time allowed. Under Rowan plan, the total wages are calculated as follows:

$$\text{Total wages} = (\text{Time taken x hourly rate}) + \left[\frac{\text{Time Taken}}{\text{Time Allowed}} \text{ x Time Saved x hourly rate}\right]$$

Illustration 2

In continuation of the illustration given under Halsey plan, calculate the total wages of worker under Rowan plan.

Total wages = (40hrs x ₦4) + $[\frac{40\text{hrs}}{60\text{ hrs.}}$ x 20 hrs. x ₦4] = ₦160 + ₦53.33 = ₦213.33

Comparison of Halsey and Rowan plans

1. Where the worker completes his work with in half the time allowed; the bonus under both the plans will be same.
2. If time saved is less than 50% of the time allowed, the Rowan plan is beneficial for the worker.
3. If time saved is more than 50% of the standard time, the Halsey plan is advantageous to the worker.

Illustration 3

The three workers Subomi, Ebube and Lilian produced 80, 100 and 120 pieces of a product X on a particular day in May 2020 in a factory, during the 8 hours' time taken in a factory. The time allowed for 10 units of product X is 1 hour and their hourly rate is ₦4. Calculate for each of these three workers the following:

1. Earnings for the day, and;
2. Effective rate of earnings per hour under;
    a. Straight piece-rate
    b. Halsey premium bonus (50% sharing) and;
    c. Rowan premium bonus-methods of labour remuneration.

Solution

Working notes

Particulars			Subomi	Ebube	Lilian
Production		(Units)	80	100	120
Time allowed	(@ 10 pieces per hour)	(Hours)	8	10	12
Time taken	(1 day = 8 hours)	(Hours)	8	8	8

Time saved		(Hours)	0	2	4
Piece rate	(₦4/10)	(₦)	0.40	0.40	0.40

1. Computation of earnings per day
   a. Straight Piece Rate

      No. of pieces produced x piece rate

      Subomi = 80 pieces x ₦0.40 = ₦32

      Ebube = 100 pieces x ₦0.40 = ₦40

      Lilian = 120 pieces x ₦0.40 = ₦48

   b. Halsey Premium Bonus

      (Std. rate x Time taken) + (1/2 x Time saved x Day rate)

      Subomi = ₦4 x 8hours + (1/2 x 0 x ₦4) = ₦32

      Ebube = (₦4 x 8 hours) + (1/2 x 2 x ₦4) = ₦36

      Lilian = (₦4 x 8 hours) + (1/2 x 4 x ₦4) = ₦40

   c. Rowan Premium Bonus

      Std. Rate x Time taken + $\left(\frac{\text{Time Taken}}{\text{Time Allowed}}\right.$ x Time Saved x Day rate)]

      Subomi = ₦4 x 8 hrs + (8hrs/10hrs x 2hrs x ₦4) = ₦48

      Ebube= ₦4 x 8hrs + (8hrs/10hrs. x 2hrs x ₦4) = ₦38.40

      Lilian = ₦4 x 8hrs. + ($\frac{\text{8hrs}}{\text{12hrs}}$ x 4hrs x ₦4) = ₦42.67

2. Computation of Effective rate of Earnings Per Hour (i.e., Earnings/Hours)

Particulars	Subomi	Ebube	Lilian
Straight piece rate	4.00	5.00	6.00
Halsey premium bonus	4.00	4.50	5.00
Rowan premium bonus	4.00	4.80	5.33

5.5.7 Halsey-Wair Plan

This is a modified system of Halsey premium bonus plan. This is also called as 33 1/3 %:662/3% sharing plan. According to this plan, 1/3 of the time saved will be paid to the worker as bonus and the remaining 662/3% is shared by the employer.

Total wages = (Time taken x Hourly rate) + [1/3 x Time saved x Hourly rate]

Illustration 4

A worker is allowed to complete a job in 80 hours with an hourly rate of ₦6. The time spent by the worker is 60 hours. Calculate the earnings of a worker under Halsey-Wair plan.

Solution

Time Allowed 80 hours; Time taken 60 hours; Time saved 20 hours; Hourly rate ₦6

Total wages = (60 hours x ₦6) + [1/3 x 20 hours x ₦6] = ₦360 + ₦ 40 = ₦400

5.5.8 Piece Rate Remuneration Methods

Under piece rate systems of wage payment, the worker's efficiency is measured in terms of production against standard set. A worker who produces more units than standard set for him is eligible for bonus in piece rate wage payment systems.

Merits

(i) Employee morale is more due to higher earnings.
(ii) Increased production result in decrease in cost of production per unit.
(iii) It is possible to set accurate labour standards.
(iv) A task is done in the most economical manner which reduces labour cost.
(v) Less supervision is required resulting less cost of supervision.
(vi) Productivity of the organisation will increase.
(vii) Labour cost can be accurately estimated.
(viii) Optimum utilisation of resources is possible.

Demerits

(a) Quality may deteriorate in order to increase the production quantity to earn more
(b) Safety conditions may be violated by the workers in order to increase production which may lead to accidents at workplace
(c) There may be apprehensions regarding rate cutting

(d) Unskilled workers sometimes earn more than skilled workers if the latter have to work on time basis
(e) If rates are not uniform for same type of jobs, it causes discontent among workers
(f) It involves more calculations and detailed production records are to be maintained
(g) The worker's health may be affected due to over-strain taken by the workers to earn more wages
(h) Inefficient workers may envy the efficient ones which may cause unrest

5.6 Output Based Method

Under this method, a fixed wages rate is paid for each unit of production, job completed, or number of operations completed irrespective of the time spent on it. The wages are calculated as follows:

Wages = No. of pieces produced x rate per piece

This method is used where the production is repetitive in nature, and it cannot be applied to the work which require skill and artistic work. The workers' pay depends upon his output and not upon the time he spends in the factory. The supervision cost is reduced as workers are paid depending on their actual units produced. This method will act as an incentive to efficient workers and act a disincentive to inefficient workers. The main disadvantage is that the production may need to be thoroughly inspected for its quality. The stoppage of work due to abnormal causes like machine break-down, power failure, shortage of power etc may cause the workers to lose their wages, and they feel insecure under this method of wage payment. The spoilage, defectives and wastage of materials is more, if this wage plan is adopted, due to reckless use to achieve higher output.

5.6.1 Piece Rate with Guaranteed Time Rate Methods

Under this method, the employee is assured of agreed level of wages for the specified level of performance. The wage rate consists of two components. The first component is of fixed nature depending on the time spent the wages are paid and the other part is variable in nature linked to merit rating and cost of living. The main disadvantage in this method is that it is more complicated in computation of wages, and it is not popular.

5.6.2 Differential Piece Rate Method

Under this method, an incentive is offered to workers to increase their output by paying higher rates for increased levels of production. Under the straight piece rate system, the time factor is not taken into consideration but under differential piece rate plan, a series of production targets will be established and as each target is reached a new piece work rate will apply. In this plan the fast-doing skilled workers can be able to reach higher levels of targets and will be compensated at higher piece rates. The extra rates of pay can act as an inducement to the employee to aim for higher productivity to increase their earnings by putting more efforts. Differential piece work plan is normally accompanied by the guaranteed day rates.

Illustration 5

ABC Ltd is following the differential piece rate system under which the following piece rates are determined at various output levels.

Production units	Rate per unit (₦)
Up to 40	3.00
41 to 60	3.50
61 to 80	4.00
Above 80	4.50

The production details of three workers are as under:

A = 38 units B=65 units C=85 units

Calculate the earnings of workers

Solution

A = 38units x ₦3.00 = ₦114.00
B = 65units x ₦4.00 = ₦260.00
C = 85units x ₦4.50 = ₦382.50

5.6.3 Taylor's Differential Piece Rate System

In this system the inefficient workers are penalised by paying him low piece rate and rewarding the efficient worker by paying him a high piece rate for his higher production. Minimum wages are not guarantee under this method.

Formula:

i. 80% of normal piece rate when below standard (Low piece rate)

ii. 120% of normal piece rate when at or above standard (high piece rate)

This method penalises not only those workers that are not only below the standard but even those whose output is just below the standard output.

5.6.4 Group Bonus Plans

In time rate methods and piece rate methods, the efficiency for each, individual worker is considered for wages and bonus calculations. But undergo group bonus plans, different groups of workers are identified, and the task is given to the group and the efficiency of the whole group, instead of each individual worker, is determined for computation of bonus and earnings. The bonus is distributed among the workers belonging to the particular group on predetermined basis. The group incentive plans can be successfully implemented where:

i. Output depends on teamwork and joint efforts of group of workers.
ii. It is difficult to measure the individual result rather than the group's result.
iii. It is necessary to work as a member of a team rather than on individual basis, for example in chemical process industry, an individual worker cannot influence the production of the plant.
iv. Both direct and indirect workers need to be compensated equally.
v. It is possible to create small work units/groups to set the standards to production and costs.
vi. Skill of the workers in the group does not vary widely.

Advantages

a. Increase in production and savings in cost of production can be achieved.
b. Supervision costs will be reduced substantially.
c. The quality of work is improved.
d. Absenteeism is reduced to minimum and creates interest in work among the workers.
e. Routing and scheduling problems are eliminated.
f. It creates team spirit and collective interest in the work.
g. Minimises waste and reduces cost per unit.
h. Clerical work in calculation of bonus is reduced.

Disadvantages

i. Individual skills and efficiency are not considered in these systems.
ii. Difficulty may arise in calculation of bonus and method of its distribution to all the workers in the group.
iii. The bonus is paid on group efforts; an individual worker may not put his maximum effort in view of equal sharing of bonus by inefficient workers.
iv. An inefficient group leader may cause the entire group to suffer.

Some of the group bonus plans are given below:

5.6.5 Priestman's Production Bonus Plan

Under this system, the standard output and standard time for each department is predetermined in consultation with the workers. Bonus is payable to the department when the actual production exceeds the standard production. The bonus is calculated as a percentage on such excess production and distributed to all employees in that particular department by the standard. For example, the standard set for a particular division is 10,000 units and actual production achieved is 12,000 units. There is excess production of 20% over the standard output. The employees in that particular division are eligible for 20% increase in their normal salaries' bonus. In this system the time wages are guaranteed if actual production of the particular division, department, group is less than the standard output. This method not only applicable for excess of actual production over the standard but also saving in material and labour costs is also considered for payment of bonus. The main drawback in this system is the efficiency of individual worker is not considered and inefficient workers can also claim for bonus in this system.

5.6.6 Cost Efficiency Bonus Plan

In this plan, the standard cost for a particular period is determined and an agreed portion of saving in actual cost over the standard is distributed among the workers as bonus. This plan is used for improvement in efficiency of workers, increase in production and to reduce costs.

5.6.7 Rucker's Plan

It is also called as share of production plan. Under this plan, the workers will get a fixed percentage of 'value added.' Value added is defined as "the increase in market value resulting from an alteration in the form, location or availability of a product or service excluded the cost of goods and services purchased from outside." This plan suggests the payment of bonus on the basis of reduction in the ratio between labour earnings and added value.

5.6.8 Nunn-Bush Plan

Under this plan, the direct labour cost is fixed and expressed as percentage of the sales value and any saving in labour cost is credited to a fund account and is distributed among the workers on a method of suitable to the work environment.

5.6.9 Towne Gain Sharing Plan

In this plan, the standard cost of production is determined and saving in cost is calculated as difference between the standard cost and actual cost. In addition to the normal wages, 50% of the saving in cost is paid as bonus to workers and supervisors in proportion to their normal earnings.

5.7 Profit Sharing

It refers to the payment of bonus to employees based on profit of the company. Generally, the companies have profit sharing schemes in which employees will receive a bonus related to the profits of the firm. The main objective of this scheme is to provide an incentive for the workforce as a whole to work collectively to improve the overall results of the organisation.

Advantages

a. Every worker in the organisation contributes towards profit irrespective of their skills and efficiency.
b. Better employer-employee relationship is established under this plan.
c. A share of profit, capital and control of the management given to employees creates a sense of belonging to the company and the workers contribute to the welfare of the company and wastage is minimised.

d. Direct relationship between profits and bonus, will increase bonus by increasing efficiency and production.
e. Skilled workers are attracted to the industry.
f. Labour morale is improved which will result in industrial peace and harmony.
g. Annual bonus payable will reduce labour turnover.
h. Co-operation and team spirit is more.

Disadvantages

The disadvantages of the scheme are as follows:

a. The reward is not linked to immediate effort and workers have to wait long period for getting their share of bonus.S
b. The bonus is declared only when the profits are available. But in bad years, even though workers might have worked hardly may not get bonus.
c. In profit sharing plan, number of employees are participating in a single scheme, and it is doubtful whether it motivates the employees in their work.
d. Profits are more influence by external factors than by the employees in spite of their efficient and hard work.

5.8 Co-partnership

Co-partnership schemes also known as 'co-ownership' involve the issue of shares to employees so that they may feel identified with the business. The employees, being shareholders also, will take more care of machines and materials as it will increase the sense of belonging and will work towards the progress of the organisation along with that their share value also increases. The improved productivity means low cost of production and higher profits, and improved standard of living of the workers.

Advantages

1. It helps to reduces labour turnover.
2. Contribution of employees to the profitability of the concern is recognised.
3. The morale of the employees is high.

4. The employees will have a greater sense of belonging since they also hold share capital in the organisation.

Disadvantages

i. The lack of production-oriented incentive system will not create any interest in work.
ii. Political interference may also possible due to employee's association in management.
iii. Efforts and rewards are not properly related.
iv. It does not differentiate between efficient and inefficient workers.
v. Even though employees are admitted into partnership they will not have any voice in management decision making.

5.9 Requisites of Good Wage Incentive Plan

For design and introduction of good wage incentive plan the following points are considered:

a. It should be simple to understand by the workers and should enable themselves to calculate their earnings.
b. It should be simple to administer and reduce clerical work.
c. It should be capable of using computers for increase in speed of calculations.
d. It should be introduced only after full consultation and agreement with the workers and unions.
e. It should act as a motivational scheme.
f. It should guarantee the minimum day wages.
g. It should be ensured to operate for a long period.
h. It should cover as many employees as possible.
i. The incentive should be paid as quickly as possible after the completion of the work.
j. The cost of administration of the scheme should be minimum.
k. The incentives should relate to the efforts and efficiency of the workers.
l. The abnormal factors should not affect the earnings of the workers.

m. The incentives should be paid only on good production units and discouragement for defective work.
n. The standards of work should be set after scientific study of work and the performance levels should be fair to reach.
o. It should conform to labour laws and regulations of the land.
p. It should minimise labour turnover and absenteeism.
q. No limits should be placed on additional earnings under the scheme.
r. It should be at least equivalent to the incentive schemes prevailing in other units or industries in the region.
s. Due consideration should be given for the saving in cost of production due to the incentive plan and the incentive that will pass to the workers.

5.10 Labour Records

The important labour records are:

1. **Clock Card**: At the time of coming in or leaving the factory premises, the employee will use a card called 'clock card' at the factory gate for recording the starting and finishing time. A clock card is a document on which starting and finishing time of an employee is recorded e.g., by insertion into a time recording device, for ascertaining total actual attendance time.
2. **Daily or Weekly Time Sheet**: A daily or weekly time sheet is a document on which the employee records how his time has been spent. The total time on the time sheet should correspond with the time shown on the clock card or attendance record. The daily or weekly time sheet will analyse his movement and when signed by the foreman, an analysis of the labour cost is made for various jobs and operations. The time sheet should be designed to show the other information like over-time, idle time, travelling time etc.
3. **Job Cards:** Unlike time sheets which relate to individual employees and may contain bookings relating to numerous jobs. A job card relates to a single job or batch and is likely to contain entries relating to numerous employees. On completion of the job, it will contain a full record of the times and quantities involved in the job or batch. The use of job cards, particularly for jobs which stretch over several weeks, makes reconciliation of work time

and attendance time a difficult task. These cards are difficult to incorporate directly into the wage calculation procedures.

4. **Piece Work Cards**: Some companies pay their workers on the basis of production but on the time spent in the factory. The payment is based on number of pieces processed or manufactured. For the workers under piece work system the time sheet is inappropriate, and it should be replaced with the piece work card showing the number of units processed or produced each day, on the basis of which wages are payable.

The time sheets and/or piece work cards should be reconciled with the payroll which contains details of wages paid to workers.

5.11 Payroll Accounting and Labour Cost Accounting

Payroll Accounting: It is concerned with the maintenance of records for the amounts due to the employees like salaries, wages, allowances, contributions to provident fund and E.S.I etc and the deduction to be made from the employees' earnings. Payroll accounting requires the information relating to employee's attendance, leaves, rates of pay, amounts to be deducted etc.

5.12 Labour Cost Accounting

It is concerned with identifying the amount of labour cost to be charged to individual jobs and overhead accounts. For this purpose, information relating to the time spent on each job or process or number of units produced is obtained from the job cards, piece work tickets etc. the idle time analysis is also necessary for labour cost accounting. The main objective of it is to record the time spent by all workers on each activity on a separate job card or time sheet and then apply the appropriate hourly rate. The labour costs are then charged to each of these activities. The job cards, time sheets, idle, timecards are the important documents for analysing production labour costs to various jobs and overhead accounts.

5.13 Time Keeping and Time Booking

5.13.1 Time keeping

It is the marking of the attendance of a worker when he comes to and leaves the factory. It is recording of time of arrival and departure at the factory gate. No. of methods are used in time keeping and with the advancement of technology, the computers are also used for time recording and analysis. The person who looks after time keeping is called 'timekeeper' and his place of work is called 'time office.' The time records are the basic data used for calculation of salaries and wages, overtime premiums etc.

5.13.2 Time Booking

It is the recording of time spent within the working day upon different jobs. It is the keeping record of particulars of work done, or time spent on each job, process operation etc. the time booking is the marking of in and out time on each job attended by the worker. The workers will mark the time in the designated document, and it is countersigned by the supervisor. It is used to ascertain the labour time spent on each job, analysis of idle time, labour cost of various jobs and products. The time booked is used to evaluate the performance of labour by comparing actual time booked with standard or budgeted time.

5.14 Labour Turnover

Labour turnover is the movement of people into and out of the organisation. It is usually convenient to measure it by recording movements out of the firm on the assumption that a leave is eventually replaced by a new employee. The term separation is used to denote an employee who leaves for any reason, labour turnover is the rate of change in the number of employee planning. Just as the high reading on a clinical thermometer is a sign to the physician that something is seriously wrong with the human organism, so is a high index of labour turnover rate a warning to management that something is wrong with the health of the organisation. A high turnover rate may mean poor personnel policies, poor supervisory practices or poor company policies. Too lower a rate of turnover can also be a danger signal.

5.14.1 Measurement of Labour Turnover

The following formulae are in common use for measuring labour turnover:

$$\text{Separation Rate} = \frac{\textit{Number of Separations}}{\textit{Average Number Employed}}$$

$$\text{Replacement rate} = \frac{\textit{Number of Employees Replaced}}{\textit{Average Number of Employees on Rolls}}$$

Flux Rate = $\frac{Number\ Joining + Number\ Leaving}{Average\ Number\ Employed}$

The average number of employees is usually taken as the simple average of the numbers at the beginning and at the end of the specified period. The turnover rate may be expressed either as a fraction or as a percentage rate may also be determined for each department or separately for various categories of work classified according to trades, grades of skill, age, years of service, sex etc. the separation rate is easy to calculate and is widely in practice.

Illustration

From the following data provided to you find out the labour turnover rate by applying

a. Flux method
b. Replacement method
c. Separation method.

Number of workers on the payroll:
At the beginning of the month – 500, At the end of the month – 600

During the month, 5 workers left, 20 persons were discharged, and 75 workers were recruited. Of these, 10 workers were recruited in the vacancies of those leaving, while the rest were engaged for an expansion scheme.

Solution

Average number of workers during the period = (500 + 600)/2 = 550

Computation of Labour Turnover

a. Flux Method

$$= \frac{Number\ of\ Separations + Number\ of\ accessions}{Average\ Number\ of\ workers\ during\ the\ period} \times 100 = \frac{25+75}{550} \times 100 = 18.18\%$$

b. Replacement Method

$$= \frac{Number\ of\ workers\ replaced\ during\ the\ period}{Average\ Number\ of\ workers\ during\ the\ period} \times 100 = \frac{10}{550} \times 100 = 1.82\%$$

c. Separation Method

$$= \frac{Number\ of\ Separations\ during\ the\ period}{Average\ Number\ of\ workers\ during\ the\ period} \times 100 = \frac{5+20}{550} \times 100 = 4.54\%$$

5.14.2 Causes of Labour Turnover

High labour turnover may be traced to the following causes which may be broadly classified under avoidable and unavoidable causes:

Avoidable Causes

1. Dissatisfaction with wages and rewards – Low pay and allowances and no opportunity to move to a higher paying job.
2. Dissatisfaction with working conditions – Noise, heat, humidity, unsanitary conditions of employment, dangerous process, poor lighting, night shift working, insufficient tooling etc cause some workers to leave the organisation.
3. Dissatisfaction with personnel policies – Autocratic methods of labour administration may prevail. There may be limited promotional policies. Request for transfer may be refused. Company may be too shortlisted to provide for an annual vacation.
4. Lack of transport facilities, accommodation, medical and other facilities and lack of amenities like recreational centre, schools etc.
5. Dissatisfaction with working hours, overtime, layoff, strikes, lockouts etc
6. Bad relationship with co-workers, superiors and unsatisfactory personnel management union disputes
7. Dissatisfaction with the job – The worker may find the job too hard. Sometimes jobs include too much of constant lifting heavy materials or the manipulation of heavy machinery. The routines in the job may be fatiguing involving undue strain upon the nerves, eyes and attention.

The above causes should attract the attention of the management most. After examining the exact cause or causes of the increasing turnover, the cost of reducing the labour turnover rate should be compared with anticipatory benefits in order to determine the final remedial measures to be adopted.

Unavoidable Causes

a. Personal betterment
b. Family circumstances
c. Climatic conditions
d. Community conditions
e. Health conditions
f. Marriage (in case of women)
g. Retirement and death
h. Migratory nature of workers
i. Dismissal or discharge due to incompetence, inefficiency, insubordination, indifferent attitude towards work
j. Redundancy due to seasonal changes, shortage of materials and other resources, slack of business, lack of planning and foresight of higher management

Management can do little control over labour turnover in the above cases

5.14.3 Measures to Reduce Labour Turnover

All employers expect to have a certain degree of labour turnover, without it the company would stagnate. The average age of employees would increase (meaning also that a large number of employees might retire simultaneously); and there could be insufficient new blood coming into the organisation. No doubt many companies would be content if their separation rates lay between 10 to 15 per cent, though few rates in the private sector of industry and commerce are as low as this. If an employing firm wishes to reduce its labour turnover because it considers it as excessive for the area and the industry, it may take the following steps to reduce labour turnover.

Pay problems

i. Increasing pay levels to meet competition.
ii. Improving pay structures to remove inequities.
iii. Altering pay systems to reduce excessive fluctuations.
iv. Introducing procedures for relating rewards more explicitly to effort or performance.

Employees Leaving to further their Career

v. Providing better career opportunities and ensuring that employees are aware of them
vi. Extending opportunities for training.
vii. Adopting and implementing 'promotion from within' policies and introducing more systematic and equitable promotion procedures.
viii. Deliberately selecting employees who are not likely to want to move much higher than their initial job.

Employees Leaving Due to Conflict

ix. Introducing more effective procedures for consultation, participation and handling grievances.
x. Improving communications by such means as briefing groups.
xi. Using the conflict resolution and team-building techniques of organisation development.
xii. Reorganizing work and the arrangement of office or workshops to increase group cohesiveness.
xiii. Educating and training management in approaches to improving their relationship with employees.

The Induction Crisis

xiv. Improving recruitment and selection procedures to ensure that job requirements are specific accurately and that the people who are selected fit the specification.
xv. Ensuring that candidates are given a realistic picture of the job, pay and working conditions.
xvi. Developing better induction and initial training programmes.

Shortage of Labour

xvii. Improving recruitment, selection and training for the people required.
xviii. Introducing better methods of planning and scheduling work to smooth-out peak loads.

Changes in Working Requirements

xix. Ensuring that selection and promotion procedures match the capacities of individuals to the demands of the work they have to do.

xx. Providing adequate training or adjustment periods when working conditions change.

xxi. Adopting payment by result systems to ensure that individuals are not unduly penalised when they are only engaged on short runs.

Losses of Unstable Recruits- Taking more care to avoid recruiting unstable individuals by analysing the characteristics of applicants which are likely to cause instability and using this analysis to screen recruits.

Adequate Statistical Control: There should be a carefully worked out system of records for keeping the required data. The management should have complete information about separations by shops, departments, occupations, sex, age, race, nationality, length of service and education. This information will help a critical analysis. It will also be possible to collect statistical evidence to invite managerial attention to the problem. If management is properly convinced about the magnitude of the problem, adequate funds and attention may be provided for the solution of this problem.

Joint Control: Joint control can be exercised through committee representing management and workers. These committees should cover the review of shop regulations, grievances, etc. the formation of these committees will encourage mutual understanding and general cooperation.

Use of Exist Interviews: Some companies arrange an exist interview when an employee calls for his final payment. A better means of getting necessary information may be an interview with employees sometime after they have left. For this purpose, exit questionnaires may be prepared. This step may lead to useful information, which may have profound effect on reducing labour turnover.

5.14.4 Cost of Labour Turnover

Any change in the personnel of an organisation entails a financial loss, unless outweighed by certain gains. Labour turnover signifies a heavy investment rather than expense for unproductive effort. It essentially constitutes an out go, that bears little or no relationship to output. The cost of labour turnover can be examined under two broad categories: (i)Preventive costs, and (ii)Replacement costs

5.14.4.1 Preventive Costs

The following costs may be listed under the heading preventive costs

a. *Personnel Administration:* It is a function concerned with maintaining good relationship between management and workers. This function is responsible for maintaining human relationship within an organisation.
b. *Medical Services:* The health of a worker has a marked effect upon productivity. Some enlightened companies arrange for annual physical check-ups of all staff and employees within the organisation.
c. *Welfare:* This includes the cost of sports facilities, laundry services etc. the provision of these services is made to retain the services of employees.
d. *Pension Schemes:* Certain authors argue whether the cost of pension schemes should be included in the cost of labour turnover. It has been noted that workers tend to remain in the employment of companies operating a pension scheme.

5.14.4.2 Replacement Costs

Labour turnover is associated with replacements. Replacement necessitates recruitment, training and absorption of new workers. If a worker is replaced, a new worker will have to be trained to substitute the replaced worker. There will also be wastage and loss of production if worker is new. Replacement cost will include cost of all these elements. Following costs can be summarised under this heading:

a. *Inefficiency of New Worker:* It is difficult to measure exactly the losses due to inefficiency of new workers. Some authors hold the view that the extra wages cost can be calculated by the following formula:

Extra wages = D – (A.B.C)

Where D = Wages paid

A = Output in good pieces

B = Normal standard time allowed per piece

C = Standard base rate of pay

The inefficiency of labour results in extra usage of services available in factory. This means additional overhead cost.

b. *Employment Department:* The cost of recruitment should be included in the cost of labour turnover.

c. *Training and Induction:* In most companies, some form of induction for new worker is undertaken. This should be included in cost of labour turnover.

d. *Loss of Output to delay in obtaining new workers:* The experience has revealed that sometime definitely elapses before any replaced worker joins the organisation. During this period, scheduled output is met by:

   a. Carrying a surplus labour force
   b. Working overtime
   c. If the scheduled output is not met, then there is direct loss of profit. All these factors add to cost of labour turnover.

e. ***Cost of Tool and Machine Breakage****:* Tool and machine breakages are more frequent when untrained or new labour is employed. It adds to the cost of labour turnover, but it is practically a difficult exercise to determine relationship between the intake of new labour and the cost of repairs.

f. ***Accident Frequency and Severity:*** When a new worker joins the factory, the chances of accidents and mishaps increase considerably. This may lead to additional cost of compensation, which finally adds to cost of labour turnover.

g. ***Cost of Scrap and Defective Work****:* When a new worker joins, the amount of scrap and defective work increases. When the material used is of high value, the cost of scrap and defective work may have serious repercussions upon the overall cost of production. The cost of defective work, which is due to inexperience of new worker, should be taken as the cost of labour turnover.

h. ***Loss of Goodwill or Disadvantageous Labour Contracts****:* If new worker is not put to the job, it will be difficult to meet the scheduled programme. In the hurry to save the goodwill of the company, some disadvantageous labour contracts may have to be entered into. All this adds to the cost of labour turnover.

The overall cost of labour turnover will appear in one or more of the items already mentioned. This cost can be shown as cost per worker employed or replaced or as a fraction of total cost of selling price. The most common way to express labour turnover cost is as follows:

Total Cost of Labour Turnover Per Employee

$$= \frac{\text{labour turnover cost}}{\text{Average no. of workers employed or replaced}}$$

Revision Questions

Multiple Choice Questions

1. What does labour cost refer to?

   (a)manufacturing cost incurred to produce units of output (b)all costs associated with manufacturing other than the direct labour cost and raw materials cost (b)cash associated with marketing, shipping, warehouse and billing activities (d)the sum of direct labour cost and all factory overheads (e)the sum of raw materials cost and direct labour cost
2. Where is worker overtime cost charged to?

   (a)work in progress inventory (b)direct labour (c)administrative expenses (d)factory overhead (e)cost of goods sold
3. Bobo Boolo worked for 15 hours overtime on the production floor of Alpha Ltd. His normal rate was ₦10 per hour. Overtime payment is 1½ . Bobo Boolo extra work was a general requirement on all production staff. The resulting overtime premium will be:

   (a)₦225 treated as prime cost (b)₦75 treated as production overhead (c)₦225 treated as production overhead (d)₦75 treated as prime cost
4. Standard output is 0.75 units per hour. A worker worked for 30 hours producing 60 units. What is time saved?

   (a)15 hours (b)11hours 15 min (c)20hours 15 min
5. The following documents are used in labour costing except

   (a)Job card (b)work card (c)attendance registers (d)clock card (e)operation card
6. $\frac{\text{Time taken}}{\text{Time allowed}}$ x time saved x hourly rate

   (a)Rowan (b)Halsey (c)Weir (d)Tolar (e)Roland
7. Koko Ltd has labour as its principal budget factor, what does this mean?

   (a)the labour hours budget is too high (b)labour will determine cash available (c)labour and sales are competing (d)labour is the largest item in the budget (e)labour is short supply
8. The following are the method of remuneration under the incentive payment by resulting scheme except ______

   (a)high-rate system (b)premium bonus scheme (c)profit sharing scheme (d)monthly salary payment (e)none of the above

9. The following data relate to work in the finishing department of a certain factory

Normal working day	7hours
Basic rate of pay per hour	₦5
Standard time allowed to produce 1 unit	4 minutes
Premium bonus payment at the basic rate	60% gross saved

On a particular day one employee finishes 180 units. His gross pay for the day will be ….. …….

(a)₦35 (b)₦50 (c)₦56 (d)₦65 (e)₦58

10. Which of the following statements is/are true about group bonus scheme?

Theory Questions

1. From the following particulars calculate the earnings of A and B on the straight piece rate basis and Taylor's differential piece rate system. Standard production 8 units per hour, normal time rate ₦0.40 per hour. Differentials to be applied: (1) 80% of piece rate below standard (2) 120% of piece rate at or above standard. In a 9hour day A produced 54 units and B produced 75 units.
2. With the help of the following information, you are required to ascertain the wages paid to workers X and Y under the Taylor's system.

Standard time allowed = 10units per hour
Normal wage rate = ₦1 per hour
Differential rates to be applied: (a)75% of piece rate when below standard
(b) 125% of piece
The workers have produced in a day of 8 hours as follows: X – 60 units, Y – 100 units

CHAPTER SIX

ACCOUNTING FOR OVERHEADS

6.1 Learning Objectives

At the end of the Chapter, the students should be able to know and understand the;

i. Meaning of overheads;
ii. Classification of overheads;
iii. Codification of overheads;
iv. Apportionment of overheads; and
v. Absorption of overheads.

6.2 Introduction

Overhead is the aggregate of indirect material cost, indirect labour cost and indirect expenses which cannot be conveniently identified with and directly allocated to a particular cost centre or cost object in an economically feasible way.

Examples of Overhead

Indirect Material cost	Stationery in production dept, administration dept, and selling and distribution dept
Indirect Labour cost	Salary of sales manager, Office manager
Indirect expenses	Rent, Rate, Repairs, Insurance and depreciation of factory Building, Admin Office.

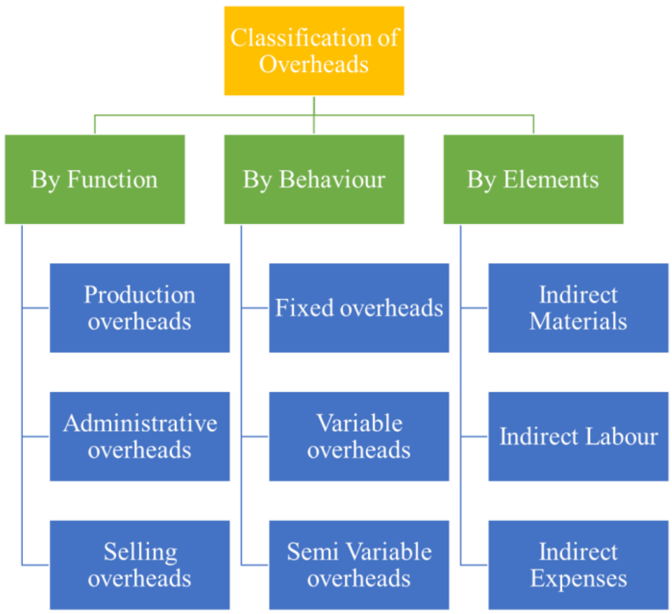
Steps for distribution of overheads

The following are steps for the distribution of overheads

i. Classification of overheads
ii. Collection of overheads
iii. Allocation of overheads
iv. Apportionment of overheads
v. Reapportionment of overheads
vi. Absorption of overheads

6.3 Classification of Overheads

Classification of overheads is the process of grouping the various items of overheads into distinct class/group on the basis of some common characteristics. Overheads are classified on the following basis:



(Author: CIPMN, 2023)

6.4 Collection of Overheads

Collection of overheads means the collection of various items of overheads under suitable account heading and a unique standing order number or cost account number. Source documents used for the collection of overheads are;

i. Material Requisition
ii. Wages Analysis Book
iii. Invoices
iv. Cost Journal
v. Subsidiary Records

6.5 Allocation of Overheads

Allocation of overheads is the process of charging the full amount of an individual it of cost directly to a cost centre for which this item of cost was incurred.

6.6 Apportionment of Overheads

Apportionment of Overheads is the process of charging the proportion of common items of cost to two or more cost centres on some equitable basis.

6.6.1 Basis of Apportionment of some common items of Production Overheads

Common items of Production Overheads	Basis of Apportionment
Factory Rent, Rates & Taxes	Floor Area Occupied
Repairs & Maintenance of factory Building	Floor Area Occupied
Insurance of Factory Building	Floor Area
Depreciation of Factory Building	Floor Area
Repairs & Maintenance of Plant & Machinery	Capital cost of plant & machinery
Insurance of plant & machinery	Capital cost of plant & machinery
Depreciation of plant & machinery	Capital cost of plant & machinery
Insurance of Inventory	Insured value of inventory
Supervision	No. of workers
Canteen, staff welfare expenses	No. of workers
Time keeping & personnel office expenses	No. of workers
Compensation to workers	Wages
Employees' state insurance contribution	Wages
Provident Fund Contribution	Wages
Stores Overheads/Store Keeping Expenses	Value of direct materials
Material Handling Charges	Weight of direct materials
Lighting & Heating	No. of light points or floor area occupied
Power/Steam consumption	Horsepower of machines or machine hours

6.7 Absorption of Overheads

Absorption of Overheads is charging overheads from cost centres to products or services by means of absorption rate which is calculated as follows:

$$Production\ Overhead\ Rate = \frac{Total\ Overheads\ of\ Cost\ Centre}{Total\ number\ of\ units\ of\ absorption\ base\ applicable\ to\ cost\ centre}$$

Methods of Absorption of overheads:

i. Percentage of Direct Material cost

This method used direct material cost as the basis for production overhead absorption rate. The rate is calculated as follows:

$$\text{Production Overhead Rate} = \frac{\text{Amount of Production Overheads}}{\text{Direct Material Cost}} \times 100\%$$

ii. Percentage of Direct Labour cost

This method used direct labour cost as the basis for production overhead absorption rate. The rate is calculated as follows:

$$\text{Production Overhead Rate} = \frac{\text{Amount of Production Overheads}}{\text{Direct Labour Cost}} \times 100\%$$

iii. Percentage of Prime cost

This method used prime cost as the basis for production overhead absorption rate. The rate is calculated as follows:

$$\text{Production Overhead Rate} = \frac{\text{Amount of Production Overheads}}{\text{Prime Cost}} \times 100\%$$

iv. Direct Labour Hour rate

This method used direct labour hours as the basis for production overhead absorption rate. The rate is calculated as follows:

$$\text{Production Overhead Rate} = \frac{\text{Amount of Production Overheads}}{\text{Direct Labour hours}} \times 100\%$$

v. Machine Hour Rate

This method used machine hours as the basis for production overhead absorption rate. The rate is calculated as follows:

$$\text{Production Overhead Rate} = \frac{\text{Amount of Production Overheads}}{\text{Machine hours}} \times 100\%$$

vi. Rate per unit of Production

This method used number units of production as the basis for production overhead absorption rate. The rate is calculated as follows:

$$\text{Production Overhead Rate} = \frac{\text{Amount of Production Overheads}}{\text{No. of Units of Production}} \times 100\%$$

Revision Questions

Multiple Choice Questions

1. In determining overhead rates, under/over recovery of overheads do occur. What is the accounting treatment of under/over recovery of overhead? (a)write off by treating it as a period cost (b)share it among the entire job worked during the period (c)carry their cost forward to future accounting periods (d)add it to stock valuation (e)disregard under/over recovery of overhead
2. Typical of the factors to be considered in wage determination are the following except….. (a)general economic climate of the industry (b)government policy (c)extent of employment locally and nationally (d)profitability of the firm (e)cost structure of firm and industry
3. In the determination of factory overhead application rates, what is the numerator in the fraction for? (a)actual factory overhead for the next period (b)estimated factory overhead for the next period (c)actual labour hours for the next period (d)actual labour hours for current period (e)estimated labour hours for the next period
4. Overhead will always be under absorbed when (a)actual cost exceeds planned cost (b)planned cost exceeds actual cost (c)actual cost is the same as planned cost (d)actual cost is more than the variance achieved (e)budgeted cost is less than standard cost
5. Under-recovery and over-recovery of production overhead are disposed of by the following methods:

(i) Transfer to production overhead under and over-absorbed account

(ii) Transfer the balance to work-in-progress, finished stock or cost sales

(iii) Transfer the balance directly to profit and loss account

(a)(i) & (iii) (b) (ii) & (iii) (c) (ii) (d) (iii) (e) (i) & (II)

6. The following are the main sources of overhead except: (a)invoices (b)stores requisition (c)goods received note (d)journal received note (e) wages analysis book
7. The point of focus for the costs relating to a particular activity in an activity-based costing system is called (a)activity (b)production (c)cost driver (d)cost pools (e)cost apportionment

8. Which of the following definitions best describes cost driver?

   (a)any activity which causes an increase in costs (b)a cost that varies with production levels

   (c)a collection of costs associated with a particular activity

   (d)any cost duly incurred by the company driver

   (e)any factor which causes a change in the cost of an activity

9. Actual production hours planned was 4,800 hours. Standard was 144 minutes per product and fixed overhead was recovered at ₦300 per unit. If actual production was 2,200 units in 4,600 hours. Calculate the over/under absorption of overhead (a)₦60,000 under absorption (b)₦60,000 over absorption (c)₦30,000 under absorption (d)₦30,000 over absorption

10. Budgeted overhead was ₦5,000 and expected output was 1,250 units. At the end of the period 1,300 unit were produced of which there were no scrapped. Actual overhead scheme was ₦5,250. How much was overhead absorbed? (a)₦250 under absorption (b)₦250 over absorption (c)₦850 under absorption (d)₦50 under absorption (e)₦670 under absorption

PRACTICE QUESTIONS

1. What steps are involved in accounting for manufacturing overheads.
2. What is meant over/under absorption of overheads?
3. What are the causes of under/over absorption overhead?

CHAPTER SEVEN

COSTING AND APPLICATION COSTING TECHNIQUES

7.1 Learning Objectives

At the end of this chapter, the students should be able to know and understand the;

i. Meaning of costing Techniques
ii. Meaning of Marginal costing
iii. Meaning of Absorption costing
iv. Application of Marginal Costing Techniques
v. Meaning of Break – Even – Analysis
vi. Assumption of Break – Even - Analysis

7.2 Introduction

Costing techniques is said to be the approaches and tools used by the management in taking decisions. They are approaches or principles used to appropriately present cost data and statement to the management for evaluation or decision making. They can be applied to make-or-buy decisions, negotiation, price appraisal and purchasing performance.

Types of Costing Techniques

There are various types of costing techniques such as;

a. Absorption costing
b. Marginal costing

7.3 Absorption costing

In absorption costing, the cost of a product or service is established by adding a share of overheads to direct costs. Absorption costing is consistent with the requirements for stock/inventory valuation in financial reporting. Marginal costing is another method of costing products or services. With marginal costing, products or services are valued at their marginal cost (variable cost) only. All fixed costs are treated as period costs and charged against in the period to which they relate. This lecture compares and contrasts absorption costing and margin costing. Under the absorption costing concept, all costs which include fixed and variable costs are ultimately charged or allocated to cost unit and total overheads are then absorbed according to a given level of activity in order to ascertain the total cost of each unit. The cost to be absorbed may be production costs only or costs of all function whether production or otherwise.

Lay-Out of Absorption Costing Techniques

XYZ LIMITED
Operating Statement for the Year Ended 31/12/202X
Using Absorption Costing Technique (ACT)

		N	N
Sales			xx
Less: Production costs			
Opening stocks/inventory		x	
Add: Production:			
Direct material	x		
Direct wages		x	
Direct expenses		x	C
Variable production		x	
Fixed production overhead (W1)		x	
Goods available for sales		x	
Less: closing stock/inventory		(x)	
Add: Under Absorbed FPO		x	x
Less: Over Absorbed FPO			x
Gross profit			
Less: Non-Production Costs:		x	
Selling and distribution costs		x	
Administrative costs		x	
Other costs (specify)		x	x
Net income before tax			x
Less: Income tax			x
Net income after tax			x

Treatment of Over/Under Fixed Production Overheads

If the firm's operating capacity is different from its normal or budgeted capacity, there will be a capacity variance. The adjustment for such a variance is to be made before determining the gross profit. If capacity variance is favourable i.e., over absorption (This arises where predetermined or budgeted overheads exceeds the actual overheads incurred) the amount is deducted from the total costs of goods manufactured and sold or from Gross profit. The amount is added to the cost of capacity if variance is unfavourable i.e., under absorption (This arises where the actual overheads incurred exceeds the predetermined of budgeted overheads absorbed). Fixed production overhead rate is determined as follows:

$$\text{Overhead Absorption Rate} = \frac{Fixed\ Production\ Overhead}{Normal\ activity\ level}$$

7.4 Marginal costing

Under a scheme of marginal costing, only variable costs i.e., direct costs and variable overheads are charged to cost unit. The marginal cost of a product is its variable cost, i.e., it includes direct materials, direct expenses and the variable part of overhead.

Marginal costing can be defined as:

"The accounting systems in which variable costs are charged to cost units and fixed costs of the period are written-off in full against the aggregate contributions. Its special value is in decision making."

For any product, the difference between sales value and variable cost is known as its contribution towards:

1. The general fixed costs of the business
2. The overall net profits

The actual net income for the period will represent the difference between total contribution and the period costs. It is however instructive to note, that alternative names for marginal costing are the contribution approach and direct costing.

Arguments for the use of marginal costing in routine costing includes:

i. Simple to operate
ii. It ignores arbitrary apportionment of fixed cost, which in some cases are indivisible by nature
iii. Accounts prepared using marginal costing is more likely an approach based on the actual cash flow

iv. Fixed costs are incurred on a timely basis e.g., rents, salaries etc and do not relate with the activity level based on submission, it is ideal to write them off in the period they are incurred.

v. Under or over absorption of overheads is completely eliminated because of non-inclusion of fixed production overhead in product costing.

vi. Where sales are constant, but production fluctuates, marginal costing shows a constant net profit whereas absorption costing shows variable amount of profit

Lay-Out of Marginal Costing Techniques

XYZ LIMITED

Operating Statement for the Year Ended 31/12/202X

Using Marginal Costing Technique (MCT)

		N	N
Sales Revenue			
Less: variable production cost			
Opening stocks/inventory		x	
Add: Production:			
Direct material	x		
Direct wages		x	
Direct expenses		x	
Variable production		x	
		x	
Less: closing stock/inventory		(x)	
Add: variable non-production cost			
Selling and distribution costs		x	
Administrative costs		x	
Other costs (specify)		x	
Total contribution			x
			x
Less: Total fixed cost		x	
Production		x	
Administration		x	
Selling		x	x
Net profit			x

Illustration

a. The normal annual level of operations of Faith Ltd is 96,000 bangles upon which the production overhead absorption rate is calculated at the end of the year, the records show the following:

Production	100,000 bangles
Sales	90,000 bangles
Selling Price	₦12

Fixed overhead budgeted and incurred is ₦201,600

<u>Production Costs</u>:	N
Direct materials	3
Direct labour	2
Variable overheads	2

Selling and Distribution expenses:

- Fixed ₦50,000
- Variable 5% of sales revenue

There was no opening stock of finished goods. Work in progress at the beginning and the end of the period were the same. You are required to prepare profit statement for the year ended 31/07/2018 based on:

i. Marginal costing

ii. Absorption costing

iii. And comment on the difference in the profit figures in (i) and (ii) above.

Faith Limited

Operating Statement for the Year ended 31/07/2018

Using Marginal Costing Technique

	₦'000	₦'000	₦'000
Sales (₦12 x 90,000 bangles)			1,080
Less: Marginal Cost of Production			
Opening Inventory	-		
Add, Production			
Material (₦3 x 100,000 bangles)	300		
Labour (₦2 x 100,000 bangles)	200		
Variable (₦2 x 100,000 bangles)	<u>200</u>		
	700		
Less: Closing Inventory (₦7 x 10,000 bangles)	<u>(70)</u>	630	

Add: Variable selling overhead (₦1,080 x 5%)	54	(684)
Total Contribution		396
Less: Fixed Cost:		
Production	201.6	
Selling	50	(251.6)
Net Profit		144.4

Faith Limited

Operating Statement for the Year ended 31/07/2018

Using Absorption Costing Technique

	₦'000	₦'000	₦'000
Sales (₦12 x 90,000 bangles)			1,080
Less: Cost of Production			
Opening Inventory	-		
Add, Production			
Material (₦3 x 100,000 bangles)	300		
Labour (₦2 x 100,000 bangles)	200		
Variable Prod Overhead (₦2 x 100,000 bangles)	200		
Fixed Production overhead (₦2.10 x 100,000 bangles)	210		
		910	
Less: Closing Inventory (₦9.10 x 10,000 bangles)		(91)	
		819	
Less: Over Absorption Fixed Prod. Overhead (₦0.84 x 10,000 bangles)		(8.4)	(810.6)
Gross Profit			269.4
Less: Operating Cost:			
Variable selling overhead (5% x ₦1,080)		54	
Fixed selling		50	(104)
Net Profit			165.4

Working:

Determination of Fixed Production Overhead = 201,600/96,000 bangles
₦2.10k

Reconciliation Statement

	Net Profit ₦'000	Closing Inventory ₦'000
Absorption Costing Technique	165.4	91
Marginal Costing Technique	(144.4)	(71)

21	21

7.5 Break – Even – Analysis

7.5.1 Preamble

Given an analysis between marginal contribution and fixed costs, it is possible to predict the net profit which should emerge at various volumes of sales whether expressed in units or in value C-V-P represent an application of marginal costing that seeks to study the relationship between cost, volume and profit at different activity levels and can be relied upon for short-term planning and decision making. It is also referred to as break-even analysis, which represents the position where total cost will equate the total revenue. The concept of breakeven analysis relies heavily on the application of the behavioural classification of cost. That is, the major distinction between fixed and variable cost.

The objectives of C-V-P analysis is to provide solution to the undermentioned questions:

a. How many units must an organisation produce and sell in order to be able to absorb the total cost of production or what is the break-even point in unit?
b. What is the total turn-over required by an organisation in order to equate the total cost of production or what is the brake-even point in sale value?
c. What will be the turn-over required by an organisation for the purpose of achieving pre-determined level of profit?
d. Under a pre-determined amount of profit, how many units must an organisation produce and sell in order to achieve the desired profit target?

7.5.2 Assumption of breakeven analysis

It is instructive to note that the application of C-V-P analysis will depend largely on the following basic assumptions:

1. It is assumed there will be no uncertainty
2. All other variable cost remains constant
3. All cost can be accurately divided into fixed and variable element

4. There are no stock level changes or that stocks are valued at marginal cost only
5. The analysis applies to the relevant range only
6. Profits are calculated on a variable costing basis
7. The only factor affecting revenue and cost is activity level
8. The analysis of C-V-P relates to a single product or constant sales mix
9. Fixed costs will remain constant within the relevant range
10. That methods of production level of technology and efficiency remain unchanged
11. That within the relevant range, cost and revenue behave in a linear fashion.

7.5.3 Methods of Determining Break Even Point

i. Mathematical
ii. Graphical

7.6.3 Application of Break-Even Analysis

a. To determine the breakeven point in units. The total cost of an organisation will be divided by contribution per unit i.e.

   BEP (Unit) $= \frac{Fixed\ Cost}{Contribution/Unit}$

b. To obtain the Break-even point in sales value divide the total fixed costs by the contribution margin ratio or multiply the BEP (units) by the associated selling price i.e.

   BEP (Sale(N) $= \frac{Fixed\ Cost}{Contribution\ Margin\ Ratio}$

   Or

   BEP = BEP (Unit) × Selling Price

   Or $\frac{Fixed\ Costs}{Contribution/Unit} \times Sale\ Price/Unit$

c. i. The level of sales in unit required to achieve a pre-determined profit before tax (PBT) will represent the summation of fixed cost and the profit before tax divided by the contribution per unit i.e.

   Unit required (PBT) = $= \frac{Fixed\ Cost + PBT}{Contribution/Unit}$

   ii. In the case of sales volume required to achieve a pre-determined profit after tax (PAT) then apply this formula

Units required (PAT) = $= \frac{Fixed\ Cost+\left\{\frac{PAT}{1-tax\ rate}\right\}}{Contribution/Unit}$

d. i. The level of sales value of result in target profit before tax is determined as follows:

Sales required (PBT) = $= \frac{Fixed\ Cost+Profit\ before\ tax}{Contribution\ Margin\ Ratio}$

Or

$$\frac{(Fixed\ Cost+Target\ Profit)\times Salesprice/Unit}{Contribution/Unit}$$

ii. However, the level of sales value that will result in target profit after tax is determined as follows:

Units required (PAT) = $= \frac{Fixed\ Cost+\left\{\frac{PAT}{1-tax\ rate}\right\}}{Contribution/Margin\ in\ Ratio}$

7.5.4 Contribution margin ratio

The word contribution represents the difference between the selling price and the marginal cost or the summation of fixed cost with the net profit. Also referred to as profit volume ratio it is designed to measure the level of contribution derivable from a specified amount of sales CMR will be determined according to the nature of information provided as follows:

a. CMR (in unit) $= \frac{Selling\ Price-Variable\ cost\ per\ unit}{Selling\ Price}$

b. CMR (in total) $= \frac{Total\ Sales-Total\ Variable\ Cost}{Total\ Sales}$

c. Where selling price or sales value is completely omitted then CMR will be determined as follows:

CMR $= \frac{Fixed\ Cost+Profit}{Contribution+Variable\ cost}$

d. It is also possible to compute CMR where net profit is presented at different activity level as follows:

CMR $= \frac{Changes\ in\ profit}{Changes\ in\ Sales\ Value}$

e. Where the existing information are to be altered as a result of additional fact then:

   i. CMR (in units) $= \frac{Revised\ Selling\ price-Revised\ Variable\ Cost}{Revised\ Selling\ Price}$

   ii. CMR (in total)$= \frac{Revised\ Total\ Sale-Revised\ Variable\ Cost}{Revised\ Selling\ Price}$

7.5.5 Margin of safety

This will represent the difference between breakeven point and the budgeted activity level. MOS indicates by how much sales may decrease before a company will suffer a loss. Margin of safety may be determined either in Unit or sales value as follows:

a. MOS (Unit) = Budgeted Unit-BEP (Unit)
b. MOS (Sale value) = Budgeted Sale-BEP (Sales value)

However, using the graphical approach, the number of units represented on the chart by the distance between the break-even point and the expected or budgeted sales, in units indicates the margin of safety, i.e., the number of units by which the anticipated sales can fall before the business makes a loss.

Illustration

The detail information relates to ABC Limited who makes a single product with budgeted sales of 10,000 units. The selling price and contribution margin ratio per product is ₦ 200 and 40% respectively. The fixed cost is ₦600,000. You are required to calculate:

a. Number of units to break-even
b. Sales at break-even point
c. What number of units to be sold to achieve a profit of ₦200,000.
d. What level of sales will achieve a profit of ₦200,000
e. What number of units should be sold to achieve a profit of ₦200,000 if tax rate is 40%
f. If fixed cost per annum is increased by ₦300,000 while variable cost and selling remains the same. What will be the breakeven points in quantity and value?

Solution

a. BEP (QTY): Fixed Cost / Contribution per unit

Determination of contribution per unit:

If selling price per unit ₦200
Contribution margin is 40% of selling price
Then: contribution per unit = 40% of ₦200 = ₦80

Then variable cost per unit = ₦200 – ₦80 = ₦120

Fixed Cost = ₦600,000
BEP (QTY) = ₦600,000 / ₦80
BEP (QTY) = 7,500 units

b. Sales at break-even point

BEP (VALUE): Fixed Cost / Contribution margin ratio
= ₦600,000 / 0.4
= ₦1,500,000
OR
BEP (QTY) x Selling price per unit
=7,500 × ₦200
= ₦1,500,000

c. What number of units to be sold to achieve a profit of ₦200,000

Number of units to be sold to achieve a profit of ₦200,000
Fixed cost + Target Profit / Contribution per unit
= 600,000 + 200,000 / 80
= 10,000 units

d. What level of sales will achieve a profit of ₦200,000

Level of sales to achieve a profit of ₦200,000
Fixed cost + Target Profit / Contribution margin ratio
= 600,000 + 200,000 / 0.4
= ₦2,000,000
OR
10,000 units x ₦200
= ₦2,000,000

e. What number of units should be sold to achieve a profit of ₦200,000 if tax rate is 40%

Number of units to achieve a profit of ₦200,000 if tax rate is 40%

$$= \frac{Fixed\ cost + Target\ Profit/1 - t}{Contribution\ per\ uit}$$

$$= \frac{600{,}000 + 200{,}000/1 - 0.4}{₦80}$$

=₦933,333.333/₦80
=11,666.67 units

f. If fixed cost per annum is increased by ₦300,000 while variable cost and selling remains the same.

i. BEP (QTY) = Fixed Cost / Contribution per unit

= ₦900,000/₦80

= 11,250 units

ii. BEP (VALUE): Fixed Cost / Contribution margin ratio

= ₦900,000/0.4

= ₦2,250,000

Revision Questions

Multiple Choice Questions

1. The company's breakeven point is 6,000 units per annum. The selling price per unit and variable cost is ₦40 per unit. What are the company's annual fixed costs?
   A. ₦120,000
   B. ₦240,000
   C. ₦300,000
   D. ₦540,000
2. ABC Limited makes a single product which it sells for ₦16 per unit. Fixed costs are ₦76,800 per month and the product has a profit/volume ratio of 40%. In a period when actual sales were ₦224,000., ABC Limited margin of safety, in units was:
   A. 2,000
   B. 4,000
   C. 6,000
   D. 8,000
3. The production overhead absorption rate for Department Y has increased to ₦15 per direct labour hour per year. Last year the rate was ₦10 per direct labour hour. Which one of the following factors is least likely to have contributed to this increase?
   A. A reduction in the level of activity due to a recession.
   B. An improvement in the productivity of direct labour
   C. An increase in the level of mechanisation
   D. An increase in the rate of pay for direct labour.
4. A company had opening inventory of 48,500 units and closing inventory of 45,000 units. Profits based on marginal costing were ₦315,250 and on absorption costing were ₦288,250. What is the fixed overhead absorption rate per unit?
   A. ₦5.94
   B. ₦6.34
   C. ₦6.50
   D. ₦9.00

5. A company sells a single product which has a contribution of ₦27 per unit and a contribution to sales ratio of 45%. This period, it forecast to sell 1,000 units giving it a margin of safety of ₦13,500 in sales revenue term. The company's total fixed costs per period is …….
   A. ₦6,075
   B. ₦7,425
   C. ₦13,500
   D. ₦20,925
6. In a period where opening inventories were 15,000 units and closing inventories were 20,000 units, a firm had a profit of ₦130,000 using absorption costing. If the fixed overhead absorption rate was ₦8 per unit, and the profit using marginal costing would be:
   A. ₦90,000
   B. ₦130,000
   C. ₦170,000
   D. ₦190,000
7. In contrast to the economist's breakeven chart, the accountant's breakeven chart usually reflects the assumptions of a ……
   A. changing selling price and a changing unit variable cost.
   B. constant selling price and a constant unit variable cost.
   C. changing selling price and a constant unit variable cost.
   D. constant selling price and a changing unit variable cost.
8. LANGTAN produces a single product. For the forth coming period, the budget contains the following information:

	N
Revenue	500,000
Fixed overheads	70,000
Contribution	100,000

   What is the margin of safety in percentage terms?
   A. 6%
   B. 14%
   C. 20%
   D. 30%

Use the following to answer question 9 and 10 below:

The following information relates to a company making television:

	N
Budgeted sales revenue	1,300,000
Budgeted profit	130,000
Budgeted contribution	520,000

9. What is the budgeted fixed cost?

   A. ₦530,000

   B. ₦430,000

   C. ₦390,000

   D. ₦290,000

10. The budgeted variable cost is ……………

    A. ₦920,000

    B. ₦880,000

    C. ₦780,000

    D. ₦650,000

Suggested Solutions

1	2	3	4	5	6	7	8	9	10
C	A	D	D	D	A	B	D	C	C

Theory Questions

1. ASELAAGUN Plc commenced the production of an energy drink called "SOBO." The standard cost data of the product is given below:

	₦
Direct Material	12
Direct Labour	8
Variable Production Overhead	3
Fixed Production Overhead	8
Standard Production Cost	31
Standard Margin	14
Selling Price	45

Production and sales quantities for the month of March 2020 are as follows:

Production	30,000 units
Sales	28,000 units

Fixed production overhead has been computed on the basis of budgeted level of 31,750 units of the product per month. Fixed overheads are incurred evenly throughout the year. The selling, distribution and administrative expenses per annum are given as follows:

Variable	10% of sales value
Fixed	₦1,800,000

You are required to prepare the operating statements for the year ended 31st March 2020 using:

c. Marginal Costing Technique

d. Absorption Costing Technique.

2. Turn Best Limited supplied you the following information about the company:

Selling price per unit	₦100
Variable cost per unit	₦60
Fixed cost	₦20,000
Actual sales	₦200,000

You are required to calculate the following:

a. Break even in unit and value

b. Profit volume ratio

c. The amount of sales value required to earn profit of ₦60,000

d. The quantity required to profit of ₦60,000

e. The amount of sales required to earn profit of ₦48,000 with tax rate of 40%

f. The Margin of safety for the period

3. Calculate the Break Point in each of the following alternative cases:

a. Fixed cost ₦9,600 and Contribution per unit ₦6

b. Fixed cost ₦9,600 and P/V Ratio 60%

c. Margin of safety 500 units and Actual sales 2,000 units

d. Margin of safety 20% and Actual sales ₦20,000

CHAPTER EIGHT

SHORT – TERM DECISION MAKING

8.1 Learning Objectives

At the end of this chapter, the students should be able to know and understand the;

i. Meaning of Decision making
ii. Costs concept associated with Decision making
iii. Product Mix Decisions
iv. Types and application of Product mix

8.2 Introduction

Decision making is the process of choosing the best among the available alternatives. A short-term decision-making focus on how to make the best use of resources in the short term. The relevant costing approach is very essential if a business is to maximise profits. Short-term decisions are made repeatedly in many different areas, such as pricing, purchasing, maintaining inventory, staffing levels and establishing which products to sell and which to discontinue. Management of a business house requires cost information for decision making under real circumstances. *For example,* they require such information for fixing selling price, control reducing costs. To perform all these functions a classification of cost according to their nature and information needs is an essential pre-requisite of the management. The breakup of the aggregate costs into relevant types, is an essential pre-requisite of making as well as of controlling costs. Classification of costs on different bases is thus necessary for various purposes. For the purpose of decision-making and control, costs are distinguished on the basis of their relevance to different type of decisions and control functions. The importance of distinguishing costs are direct or indirect lies in the fact that direct costs of a product or an activity be accurately allocated while indirect costs have to be apportioned on the basis cost assumptions. This is so because direct costs are controllable at the operational level whereas indirect costs are not amenable to such control.

8.3 Definition of Decision making

Decision making is the process of choosing the best among the available alternatives. a decision-making process involves the following practical steps:

Step 1: Define the problem in clear terms

Step 2: Identify the possible alternatives

Step 3: Determine the evaluation criterion on the basis of which possible alternatives are to be evaluated

Step 4: Evaluate the possible alternatives on the basis of evaluation enter/on considering financial factors such as commercial cost-benefit analysis and non-financial factors such as social cost-benefit analysis

Step 5: Rank the evaluated alternatives in order of priorities

Step 6: Select the most profitable alternative (s) as per requirements of the business.

8.4 Cost Concepts Associated with Decision-Making

Certain costs are associated with decision-making, let us first understand them. Cost can be *classified* according to their nature and information needs of the management in the following manner"

1. By Element	Under this classification costs are classified into (a) Direct Costs and (b) Indirect Costs according to elements viz., Materials, Labour and Expenses.
2. By Function	Under this classification costs are classified as: Production Cost, Administration Cost: Selling Costs; Distribution Cost; Research C Development Cost etc.
3. By Behaviour	Under this classification costs are classified as Fixed, Variable and Semi Variable Costs. Fixed costs can be further classified as Committed and Discretionary Costs.
4. By Normality	Under this classification costs are classified as Normal Costs and Abnormal Costs.
5. By Controllability	Under this Classification costs are. classified as Controllable Costs and Uncontrollable costs.

8.5 Relevant Cost

Meaning	Relevant costs are those expected future costs which differ under different alternatives.
Examples	In case of whether to retain or replace an old machine, the realizable value and dismantling cost of old machine are relevant costs but the present written down book value of old machine is irrelevant cost.
Importance	Relevant cost analysis helps in drawing the attention of managers to those elements of costs which are relevant for the decision.

8.5.1 Sunk Costs

Meaning	Sunk Costs are the historical costs which have already been incurred by decision made in past and cannot be changed by any decision made in the future. Sunk coats are irrelevant in decision making because these are past costs

8.5.2 Opportunity Cost

Meaning	Opportunity cost is the cost of next best alternative of resources. It is the measure of benefits foregone by rejecting the second-best alternative of resources in favour of the best. It is the value of opportunity lost by diversion of an input factor from one use to another. It is also defined as the maximum contribution that is forgone by using the scarce resources for a particular purpose.

8.5.3 Out of Pocket Costs

Meaning	Out of pocket cost is that portion of costs which involves payments to outsiders i.e., it gives rise to cash expenditure as opposed to such costs as depreciation, which do not involve any cash expenditure.

8.5.4 Differential Costs

Meaning	Differential cost is the change (increase or decrease) in the total cost (variable as well as fixed) due to change in the level of activity, technology or production process or method or production.

8.5.5 Discretionary Costs

Meaning	Discretionary costs are the costs— a. Which are incurred at the discretion of management b. Which can be avoided by the managerial decision c. Which arise from periodic (usually yearly) decisions outlay to be incurred. d. Which are not tied to a clear cause and effect relationship between inputs and outputs. The noteworthy feature of discretionary costs is that managers are seldom confident that the "correct" amounts are being spent.

8.6 Product Mix Decisions

Product mix decisions involve deciding upon the priority of products to be produced *and sold so as* to maximise the profit. For the purposes of understanding, Product Mix

Decisions may be studied under the following six headings:

1. Product Mix Decision when there is only one key factor 2. Product Mix Decision when there is only one key factor and product specific are also given 3. Product Mix Decision where there are more than one key factors 4. Product Mix Decision when there is more than one level of activity 5. Product Mix Decision when a product passes through various depart'-e[1]' departmental hours are limited 6. Product Mix Decision when Sales Demand of two or more products at differ prices are given

8.6.1 Product Mix Decision when there is only one key factor

Meaning of Key Factor	Key Factor is a factor which limits the activities of an undertaking. The extent of its influence must first be assessed while preparing *functional* budgets and taking decisions about the profitability of a product.
Examples of Key Factor	Some of the examples of key factor are: a. Shortage of Raw Material b. Shortage of Labour Hour c. Machine Capacity available d. Sales Capacity available e. Cash available I

<table>
<tr><td>Basis of Decision</td><td>The product mix decision should be taken on the basis of contribution per
$\frac{\text{Contribution per unit}}{\text{Unit of key factor i.e., key factor per unit}}$</td></tr>
<tr><td>Procedure</td><td>The following procedure may be followed to decide the most profitable product mix.
Step 1: Calculate the Contribution per unit of key factor
$= \frac{\text{Contribution per unit}}{\text{Key Factor per unit}}$
Step 2: Assign the Flanking (say 1, II, III) to various products on the basis of contribution per unit of key factor [e.g., Rank 1 to largest contribution, Rank II to second largest contribution and so on]</td></tr>
<tr><td></td><td>Step 3: First allocate the key factor resources (say Material, Labour Hours, Machine Hours) to meet the committed sales of products (if any)
Step 4: Then allocate the balance of key factor resources to products ranked on the basis of contribution per unit of key factor [e.g., First allocate to Rank 1 Product up to maximum sales demand, then allocate to Rank II Product and so on]
Step 5: Find out the quantity of each product to which key resources have been allocated and total contribution for such product mix. This is called the most profitable product mix.
Step 6: Calculate the profit for the suggested product mix.</td></tr>
<tr><td>Basis for Deciding upon Priority of Products</td><td>To decide upon the priority of products, the following guidelines may be used:
<table>
<tr><td>Case</td><td>Basis for deciding upon the Priority of Products</td></tr>
<tr><td>(a) If maximum sales (in units) are a limiting factor</td><td>(a) Contribution per unit</td></tr>
<tr><td>(b) If maximum sales (in value) are a limiting factor</td><td>(b) Profit-volume ratio (or P/V Ratio)</td></tr>
<tr><td>(c) If raw material is a limiting factor</td><td>(c) Contribution per unit of raw material required to produce one unit of a product</td></tr>
<tr><td>(d) If labour hour is a limiting factor</td><td>(d) Contribution per unit of labour hour required to produce one unit of a product</td></tr>
<tr><td>(e) If machine hour is a limiting factor</td><td>(e) Contribution per unit of machine hour required to produce one unit of a product</td></tr>
<tr><td>(f) If there is heavy demand for the product</td><td>(f) Profit/Volume Ratio (or P/V Ratio)</td></tr>
<tr><td>(g) If there is low demand for the product</td><td>(g) Low Breakeven point</td></tr>
</table></td></tr>
</table>

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