KARPAGAM ACADEMY OF HIGHER EDUCATION
(Deemed To Be University)
(Established Under Sec 3 of Ugc Act, 1956)
Pollachi Main Road, Eachanari Post, Coimbatore - 641021
(For the candidates admitted from 2016 onwards)
DEPARTMENT OF COMMERCE

Semester V

		L	T	P	C
16CCU502 A	**MANAGEMENT ACCOUNTING**	6	2	-	6

Course Objectives

1. To understand the role of management accountant in an organization, and the importance of upholding ethical standards
2. To compute necessary management accounting information

Course Outcome

1. Determine and evaluate the funds flow and cash flow statement to know the movement of working capital.
2. Calculate Financial Ratios to analyze the performance and efficiency of the company
3. Prepare various budgets to the company.

UNIT-I

Introduction : Meaning, Objectives, Nature and Scope of management accounting, Difference between cost accounting and management accounting, Cost control and Cost reduction, Cost management

UNIT-II

Analysis and Interpretation of Financial Statements- Meaning – types of financial analysis – comparative statements – common size statements, - trend analysis. Ratio Analysis, meaning, objective, limitation, classification, computation and interpretation, liquidity, leverage activity and profitability raios. Return on Capital employed computation and uses.

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UNIT- III

Fund flow and Cash Flow: Meaning – Definition – Uses and Limitations – Procedures for Preparing Fund Flow Statement. Cash Flow Analysis: Meaning – Objectives – Uses and significance of CFS – Comparison between Funds Flow and Cash Flow Statements – Preparation of Cash Flow Statement as per Accounting Standards

UNIT- IV

Marginal Costing: Absorption versus Variable Costing: Distinctive features and income determination. Cost-Volume-Profit Analysis, Profit / Volume ratio. Break-even analysis- Angle of incidence, margin of safety

UNIT- V

Budgetary Control: Budgeting and Budgetary Control: Concept of budget, budgeting and budgetary control, objectives, merits, and limitations. Budget administration. Functional budgets. Fixed and flexible budgets. Zero base budgeting. Programme and performance budgeting.

Suggested Readings:

Text Book:

1. Jain and Narang,. (2007) *Cost and Management Accounting*. Ludhiana, Kalyani Publishers.

Reference Books:

1. Goel Rajiv (2012) *Management Accounting*. Mumbai, International Book House.
2. Arora, M.N. (2013) *M a n a g e m e n t A c c o u n t i n g* [10th Edition]. New Delhi. Vikas Publishing House.

3. Maheshwari, S.N. and S.N. Mittal. *M a n a g e m e n t Accounting* [10th Edition]. New Delhi, Shree Mahavir Book Depot.

4. Khan, M.Y. and Jain, P.K. (2002). *Management Accounting*. New Delhi, McGraw Hill Education.

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LECTURE PLAN
DEPARTMENT OF COMMERCE

STAFF NAME: Dr.R.Velmurugan, Mrs.K.Kavitha
SUBJECT NAME: Management Accounting SUB.CODE:16CCU502A
SEMESTER: V CLASS: III B.Com (CA)

S.No	Lecture Duration Period	Topics to be Covered	Support Material/Page Nos
		UNIT-I	
1	1	Introduction to Management Accounting: Meaning and Definition	R1: A1-A2
2	1	Branches of Accounting – Financial, Cost and Management Accounting	R1: A2-A3
3	1	Meaning of Financial Accounting, Difference between Financial and Management Accounting	T1: II-8
4	1	Objectives and Nature of Management Accounting	R1: A3-A5
5	1	Scope of Management Accounting	R1:1.1-1.2
6	1	Functions of Management Accounting	T1: II 5-6
7	1	Limitations of Management Accounting	T1: II 9-10
8	1	Meaning of Cost Accounting, Difference between Cost and Management Accounting	R1: A38-A43
9	1	Cost Centre and Cost Reduction	T: II-9
10	1	Cost Management	W1
11	1	Role of Management Accountant in Decision Making	R1:A8-A9
12	1	Requisites for Installation of Management Accounting	R1: A18

13	1	Tools and Techniques of Management Accounting	T1: II6-7
14	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit I=14		
		UNIT-II	
1	1	Analysis and Interpretation of Financial Statement – Introduction and Meaning	T1: II 94 -99
2	1	Types of Financial Statement Analysis – Comparative, Common Size, Trend	T1: II 99 – 100
3	1	Problems on Comparative Statement	T1: II 102 – 107
4	1	Problems on Comparative Statement	R2: 5.14-5.17
5	1	Problems on Comparative Statement (T)	R2: 5.14-5.17
6	1	Problems on Common Size Statement	R2: 5.15-5.17
7	1	Problems on Common Size Statement	R2: 5.15-5.17
8	1	Problems on Common Size Statement (T)	R2: 5.15-5.17
9	1	Problems on Trend Analysis	R2: 5.18
10	1	Problems on Trend Analysis (T)	R2: 5.18
11	1	Ratio Analysis – Meaning, Objectives, Limitations	T1: II 116-118
12	1	Computation and Interpretation of Ratios – Problems on Liquidity Ratio	T1: II 118-135 R2: 5.19-5.30
13	1	Problems on Liquidity Ratio (T)	T1: II 134-135
14	1	Problems on Leverage	T1: II 134-135
15	1	Problems on Leverage	T1: II 134-135
16	1	Problems on Leverage (T)	T1: II 134-135
17	1	Problems on Profitability Ratios	R2: 5.24-5.36
18	1	Problems on Profitability Ratios (T)	R2: 5.24-5.36
19	1	Problems on Return on Capital Employed	R2: 5.24-5.36

20	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit II =20		
		UNIT-III	
1	1	Meaning and Definition of Fund Flow Statement	T: II 183 – 186
2	1	Uses and Limitations of Fund Flow Statement	R1: 136 – 138
3	1	Procedure for Preparing Fund Flow Statement	T1: II. 187
4	1	Schedule of Change in Working Capital	R1: 2.7-2.8
5	1	Schedule of Change in Working Capital (T)	R1: 2.11-2.12
6	1	Calculation of Fund From Operations	R2: 2.6
7	1	Calculation of Fund From Operations (T)	R2: 2.23-2.25
8	1	Problems on Fund Flow Statement	R2: 2.12-2.14
9	1	Problems on Fund Flow Statement (T)	R2: 2.15-2.16
10	1	Problems on Fund Flow Statement	R2: 2.19-2.24
11	1	Problems on Fund Flow Statement (T)	R2: 2.33-2.53
12	1	Cash Flow – Introduction, Meaning and Definition	R1: 2.17
13	1	Uses and Significance of Cash Flow Statement	R1: B 2.31-2.32
14	1	Comparison between Fund Flow and Cash Flow Statement	R2: 3.2
15	1	Sources and Applications of Cash and Preparation of Cash Flow Statement	R2: 3.3-3.4
16	1	Problems on Cash Flow Statement	R2: 3.9-3.12
17	1	Problems on Cash Flow Statement (T)	R2: 3.12-3.18
18	1	Problems on Cash Flow Statement	R2: 3.19-3.20
19	1	Problems on Cash Flow Statement (T)	R2: 3.21-3.3.24

20	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit III=20		
		UNIT-IV	
1	1	Marginal Costing – Introduction, Meaning and Definition	R1: C197-198
2	1	Features and Objectives of Marginal Costing	R2: 5.6
3	1	Marginal Costing and Absorption Costing	R2 : 5.6 – 5.8
4	1	Advantages and Limitations of Marginal Costing	R2 : 5.6 – 5.8
5	1	Absorption Vs Variable Costing	R2: 6.10 – 6.11
6	1	Distinctive Features and Income Determination	W2
7	1	Problems on Cost Volume Profit Analysis	R2: 6.12-6.14
8	1	Problems on Cost Volume Profit Analysis (T0	R2: 6.12-6.14
9	1	Problems on PV Ratio	R2: 6.29-6.31
10	1	Problems on PV Ratio (T)	R2: 6.31- 6.33
11	1	Problems on PV Ratio	R2: 6.34- 6.36
12	1	Problems on PV Ratio (T)	R2: 6.37- 6.43
13	1	Problems on Break Even Point	R2: 6.15-6.16
14	1	Problems on Break Even Point (T)	R2:6.16-6.20
15	1	Problems on Break Even Point	R2: 6.20-6.22
16	1	Problems on Break Even Point (T)	R2: 6.22-6.23
17	1	Problems on Margin of Safety	R2: 6.23-6.25
18	1	Problems on Margin of Safety (T)	R2: 6.25-6.28
19	1	Angle of Incidence	W3
20	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit IV=20		
		UNIT-V	

1	1	Budgetary Control, Meaning of Budget, Budgeting and Budgetary Control	R1: C1-C3
2	1	Definition, Objectives and Essentials of Budgeting	T1: 4.3-4.7
3	1	Advantages and Limitations of Budgetary Control	R1: C3-C6
4	1	Classification of Budges – Functional, Fixed and Flexible	R1: C11-C15
5	1	Problems on Purchase Budget	R2: 7.19-7.22
6	1	Problems on Purchase Budget (T)	R2: 7.23-7.25
7	1	Problems on Production Budget	R2: 7.14 – 7.16
8	1	Problems on Production Budget (T)	R2: 7.16 – 7.19
9	1	Problems on Sales Budget	R2: 7.25 – 7.27
10	1	Problems on Sales Budget (T)	R2: 7.27 – 7.30
11	1	Problems on Cash Budget	R2: 7.37-7.41
12	1	Problems on Cash Budget (T)	R2: 7.42-7.57
13	1	Problems on Flexible Budget	R2: 7.58-7.65
14	1	Problems on Flexible Budget (T)	R2: 7.65-7.80
15	1	Problems on Master Budget	R2: 7.80-7.81
16	1	Problems on Master Budget (T)	R1: C39-C40
17	1	Zero Base Budgeting	R1: C64-C66
18	1	Programme and Performance Budgeting	W4
19	1	Recapitulation and Discussion of Important Questions	
20	1	Discussion of Previous ESE Question Papers.	
21	1	Discussion of Previous ESE Question Papers.	
22	1	Discussion of Previous ESE Question Papers.	
	Total No of Hours Planned for unit V=22		
Total Planned Hours	**96**		

TEXT BOOK

1. Jain and Narang. 2014. *Cost and Management Accounting,* Kalyani Publishers, Ludhina

REFERENCES

1. Maheswari, S.N. 2015. *Principles of Management Accounting*, Sultan Chand and Sons, New Delhi
2. Ramachandran, R and Dr.R.Srinivasan. 2002. *Management Accounting, Theory, Problems and Solutions*, Sriram Publications, Trichy.

WEBSITES

W1: https://whatis.techtarget.com/definition/cost-management

W2: http://www.accountingnotes.net/cost-accounting/marginal-costing/income-determination-under-absorption-and-marginal-costing/7563

W3: http://managerial-accounting.blogspot.com/2012/11/what-is-angle-of-incidence-in-break.html

W4: https://efinancemanagement.com/budgeting/performance-budget

UNIT-I

SYLLABUS

Introduction – : Meaning, Objectives, Nature and Scope of management accounting, Difference between cost accounting and management accounting, Cost control and Cost reduction, Cost management

Introduction

A business enterprise must keep a systematic record of what happens fro m day- tot-day events so that it can know its position clearly. Most of the business enterprises are run by the corporate sector. These business houses are required by law to prepare periodical statements in proper form showing the state of financial affairs. The systematic record of the daily events of a business leading to presentation of a complete financial picture is known as accounting. Thus, Accounting is the language of business. A business enterprise speaks through accounting. It reveals the position, especially the financial position through the language called accounting.

MEANING AND DEFINITION OF ACCOUNTING

The American Institute of Certified Public Accountants Committee on Terminology proposed in 1941 that accounting may be defined as, "The art of recording, classifying and summarizing in a significant manner and in terms o f money, transactions and events which are, in part at least, of a financial character and interpreting the results thereof".

BRANCHES OF ACCOUNTING

Accounting can be classified into three categories:

1. Financial Accounting
2. Cost Accounting and
3. Management Accounting

1. Financial Accounting

Financial Accounting is commonly carries on in the general offices o f a business. It is concerned with revenues, expenses, assets and liabilities of a business house. Financial Accounting has two-fold objective, viz.

a. To ascertain the profitability of the Business and
b. To know the financial position of the concern

2. Cost Accounting

It is a method of accounting for cost. The process of recording and accounting for all the elements of cost is called cost accounting.

The Institute of Cost and Works Accountants, India defines cost accounting as, "the technique and process of ascertainment of costs. Cost accounting is the process of accounting for costs, which begins with recording of expenses or the bases on which they are calculated and ends with preparation of statistical data".

To put it simply, when the accounting process is applied for the elements o f costs (i.e., Materials, Labour and Other expenses), it becomes Cost Accounting.

3. Management Accounting

Management accounting is not a specific system of accounting. It could be any form of accounting which enables a business to be conducted more effectively and efficiently. It is largely concerned with providing economic information to mangers for achieving organizational goals. It is an extension of the horizon of cost accounting towards newer areas of management. Much management accounting information is financial in nature but has been organized in a manner relating directly to the decision on hand.

Management Accounting is comprised of two words Management and Accounting. It means the study of managerial aspect of accounting. The emphasis of management accounting is to redesign accounting in such a way that it is helpful to the management in formation of policy, control of execution and appreciation of effectiveness.

Management accounting is of recent origin. This was first used in 1950 by a team of accountants visiting U.S.A under the auspices of Anglo-American Council on Productivity

DEFINITION OF MANAGEMENT ACCOUNTING

Anglo-American Council on Productivity defines Management Accounting as, "the presentation of accounting information in such a way as to assist management to the creation of policy and the day to day operation of an undertaking"

The American Accounting Association defines Management Accounting as "the methods and concepts necessary for effective planning for choosing among alternative business actions and for control through the evaluation and interpretation of performances".

The Institute of Chartered Accountants of India defines Management Accounting as follows: "Such of its techniques and procedures by which accounting mainly seeks to aid the management collectively has come to be known as management accounting"

From these definitions, it is very clear that financial data is recorded, analyzed and presented to the management in such a way that it becomes useful and helpful in planning and running business operations more systematically.

OBJECTIVES OF MANAGEMENT ACCOUNTING

1. To assists the management in promoting efficiency. Efficiency includes best possible services to the customers, investors and employees.
2. To prepare budgets covering all functions of a business
3. To compare the actual performance with plan for identifying deviations and their causes
4. To interpret financial statement to enable the management to formulate future policies
5. To arrange for the systematic allocation of responsibilities
6. To submit to the management at frequent intervals operating statement and shot term financial statements.

NATURE OF MANAGEMENT ACCOUNTING

1. Provides Accounting Information

Management accounting is based on accounting information Management accounting is a service function and it provides necessary information to different levels of management.

2. Cause and Effect Analysis

The role of financial accounting is limited to find out the ultimate result, i.e., profit and loss; management accounting goes a step further. Management accounting discusses the cause and effect relationship. The reasons for the loss are probed and the factors directly influencing the profitability are also studied. Profits are compared to sales, different expenditures, current assets, interest payables, share capital, etc.

3. Use of Special Techniques and Concepts

Management accounting uses special techniques and concepts according to necessity to make accounting data more useful. The techniques usually used include financial planning and analyses, standard costing, budgetary control, marginal costing, project appraisal, control accounting, etc.

4. Taking Important Decisions

It supplies necessary information to the management which may be useful for its decisions. The historical data is studied to see its possible impact on future decisions. The implications of various decisions are also taken into account.

5. Achieving of Objectives

Management accounting uses the accounting information in such a way that it helps in formatting plans and setting up objectives. Comparing actual performance with targeted figures will give an idea to the management about the performance of various departments. When there are deviations, corrective measures can be taken at once with the help o f budgetary control and standard costing.

6. No Fixed Norms

No specific rules are followed in management accounting as that of financial accounting. Though the tools are the same, their use differs from concern to concern. The deriving of conclusions also depends upon the intelligence of the management accountant. The presentation will be in the way which suits the concern most.

7. Increase Efficiency

The purpose of using accounting information is to increase efficiency of the concern. The performance appraisal will enable the management to pin-point efficient and inefficient spots. Effort is made to take corrective measures so that efficiency is improved. The constant review will make the staff cost conscious.

8. Supplies Information and Not Decision

Management accountant is only to guide and not to supply decisions. The data is to be used by the management for taking various decisions. How the data to be utilized is will depend upon the caliber and efficiency o f the management.

9. Concerned with Forecasting

The management accounting is concerned with the future. It helps the management in planning and forecasting. The historical information is used to plan future course of action. The informant ion is supplied with the object to guide management for taking future decisions.

SCOPE OF MANAGEMENT ACCOUNTING

Management accounting is concerned with presentation of accounting information in the most useful way for the management. Its scope is, therefore, quite vast and includes within its fold almost all aspects of business operations. However, the following areas can rightly be identified as falling within the ambit of management accounting:

1. Financial Accounting

Financial Accounting provides historical information. It forms the basis for future planning and financial forecasting. A properly designed financial accounting system is a must for securing full control and co-ordination of business operations.

2. Cost Accounting

Cost accounting provides various techniques of costing like marginal costing (It reveals relationship between Cost, Volume and Sales:: It guides management in pricing, decision making and assessment of profitability), Standard Costing, Operation Costing, etc., These techniques play an important role in assisting the management in the formulation of policy and the operations of the undertaking.

3. Budgetary Control

This includes framing of budgets, comparison of actual performance with budgeted performance, computation of variances, finding out their causes and suggesting remedial measures.

4. Inventory Control

It is concerned with control over the inventory from the time it is received till its disposal.

5. Reporting

Reporting includes the preparation of monthly, quarterly, half-yearly income statements and other related reports such as cash flow (Statement showing inflow and outflow of cash during a particular period) and fund flow statements. These reports are submitted to the management for evaluation of performance and decision making.

6. Statistical Methods

Statistical tools like graphs, charts, index numbers are used for presentation of information to various departments.

7. Taxation

It includes preparation of income statement, assessing the effect on tax on capital expenditure proposals and pricing,

8. Methods and Procedures

They deal with organizational methods for cost reduction, procedures for improving the efficiency of accounting and office operations.

9. Internal Audit

This refers to the establishment of a suitable internal audit system (for detecting accounting errors and fraud at the earliest) for internal control.

10. Office Services

They cover a wide range of activities like data processing, filing, copying, printing, communication, etc.,

LIMITATIONS OF MANAGEMENT ACCOUNTING

1. Limitation of Accounting Records

Management accounting derives its information from financial accounting, cost accounting and other records. It is concerned with the rearrangement or modification of data. The correctness or otherwise of the management accounting depends upon the correctness of these basic records. The limitations of these records are also the limitations of management accounting.

2. It is only a Tool

Management accounting is not an alternate or substitute for management. It is a mere tool for management. Ultimate decisions are being taken by management and not by management accounting.

3. Heavy Cost of Installation

The installation of management accounting system needs a very elaborate organization. This results in heavy investment which can be afforded only by big concerns.

4. Personal Bias

The interpretation of financial information depends upon the capacity of interpreter as one has to make a personal judgment. Personal prejudices and bias affect the objectivity of decisions.

5. Psychological Resistance

The installation of management accounting involves basic change in organization set up. New rules and regulations are also required to be framed which affect a number of personnel and hence there is a possibility of resistance form some or the other.

6. Evolutionary Stage

Management accounting is only in a developmental stage. Its concepts and conventions are not as exact and established as that of other branches of accounting. Therefore, its results depend to a very great extent upon the intelligent interpretation of the data of managerial use.

7. Provides only Data

Management accounting provides data and not decisions. It only informs, not prescribes. This limitation should also be kept in mind while using the techniques of management accounting.

8. Broad base Scope

The scope of management accounting is wide and this creates many difficulties in the implementations process. Management requires information from both accounting as well as non-accounting sources. It leads to inexactness and subjectivity in the conclusion obtained through it.

DIFFERENCE BETWEEN FINANCIAL AND MANAGEMENT ACCOUNTING

Financial accounting and management accounting are closely interrelated since management accounting is to a large extent rearrangement of the data provided by financial accounting. Moreover, all accounting is financial in the sense that all accounting systems are in monetary terms and management is responsible for the contents of the financial accounting statements. In spite of such a close relationship between the two, there are certain fundamental differences. These differences can be laid down as follows:

1. Objectives

Financial accounting is designed to supply information in the form of profit and loss account and balance sheet to external parties like shareholders, creditors, banks, investors and Government. Information is supplied periodically and is usually of such type in which management is not much interested. Management Accounting is designed principally for providing accounting information for internal use of the management. Thus, financial accounting is primarily an external reporting process while management accounting is primarily an internal reporting process.

2. Analyzing Performance

Financial accounting portrays the position of business as a whole. The financial statements like income statement and balance sheet report on overall performance or statues of the business. On the other hand, management accounting directs its attention to the various divisions, departments of the business and reports about the profitability, performance, etc., of each of them. Financial accounting deals with the aggregates and, therefore, cannot reveal what part of the management action is going wrong and why. Management accounting provides detailed analytical data for these purposes.

3. Data Used

Financial accounting is concerned with the monetary record of past events. It is a post-mortem analysis of past activity and, therefore, out the date for management action. Management accounting is accounting for future and, therefore, it supplies data both for present and future duly analyzed in detail in the 'management language' so that it becomes a base for management action.

4. Monetary Measurement

In financial accounting only such economic events find place, which can be described in money. However, the management is equally interested in non-monetary economic events, viz., technical innovations, personnel in the organization, changes in the value of money, etc. These events affect management's decision and, therefore, management accounting cannot afford to ignore them. For example, change in the value of money may not find a place in financial accounting on account of "going concern concept". But while affecting an insurance policy on an asset or providing for replacement of an asset, the management will have to take into account this factor.

5. Periodicity of Reporting

The period of reporting is much longer in financial accounting as compared to management accounting. The Income Statement and the Balance Sheet are usually prepared yearly or in some cases half-yearly. Management requires information at frequent intervals and, therefore, financial accounting fails to cater to the needs of the management. In management accounting there is more emphasis on furnishing information quickly and at comparatively short intervals as per the requirements of the management.

6. Precision

There is less emphasis on precision in case of management accounting as compared to financial accounting since the information is meant for internal consumption.

7. Nature

Financial accounting is more objective while management accounting is more subjective. This is because management accounting is fundamentally based on judgement rather than on measurement.

8. Legal Compulsion

Financial accounting has more or less become compulsory for every business on account of the legal provisions of one or the other Act. However, a business is free to install or not to install system of management accounting.

The above points of difference between Financial Accounting and Management Accounting prove that Management Accounting has flexible approach as compared to rigid approach in the case of Financial Accounting. In brief, financial accounting simply shows how the business has moved in the past while management accounting shows how the business has to move in the future.

DIFFERENCE BETWEEN COST AND MANAGEMENT ACCOUNTING

Cost accounting and Management accounting are tow modern branches of accounting. Both the systems involve presentation of accounting data for the purpose of decision making and control of day-to-day activities. Cost accounting is concerned not only with cost ascertainment, but also cost control and managerial decision making. Management accounting makes use of the cost accounting concepts, techniques and data. The functions of cost accounting and management accounting are complimentary. In cost accounting the emphasis is on cost determination while management accounting considers both the cost and revenue. Though it appears that there is overlapping of areas between cost and management accounting, the following are the differences between the two systems.

1. Objective

The objective of cost accounting is the ascertainment and control of costs of products or services. But the objective of management accounting is to help the management in decision-making, planning, control etc.

2. Scope

Cost accounting deals primarily with cost data. Bust management accounting deals with both cost and revenue. It includes financial accounting, cost accounting, budgeting, reporting to management and interpretation of financial data. Thus, scope of management accounting is wider than that of cost accounting.

3. Data Used

In cost accounting, only those transactions which can be expressed in figures are taken. Only quantitative aspect is recorded in cost accounting. But management accounting uses both quantitative and qualitative information.

4. Nature

Cost accounting uses both past and present figures. But management accounting is concerned with the projection of figures for future. The policies and plans are prepared for providing future guidelines.

ROLE OF MANAGEMENT ACCOUNTANT IN DECISION MAKING

Management Accountant is an officer who is entrusted with Management Accounting function of an organization. He plays a significant role in the decision making process of an organization. The organizational position of Management Accountant varies form concern to concern depending upon the pattern of management system. He may be an executive in some concern, while a member of Board of Directors in case o f some other concern. However, he occupies a key position in the organization.

Management Accountant, otherwise called Controller, is considered to be a part of the management team since he has the responsibility for collecting vital information, both fro m within and outside the company. The functions of the Controller have been laid down by the Controller's Institute of America. These Functions are:

1. To establish, coordinate and administer, as an integral part of management, an adequate plan for the control o f operations. Such a pla n would provide, to the extent required in the business cost standards, expense budgets, sales forecasts, profit planning, and programme for capital investment and financing, together with necessary procedures to effectuate the plan.
2. To compare performance with operating plan and standards and to report and interpret the results of operation to all levels of management, and to the owners of the business. This function includes the formulation and administration of accounting policy and the compilations of statistical records and special reposts as required
3. To consult withal segments o f management responsible for policy or action conserving any phase of the operations o f business as it relates to the attainment of objective, and the effectiveness of policies, organization strictures, procedures.
4. To administer tax policies and procedures.
5. To supervise and coordinate preparation of reports to Government agencies.
6. The assured fiscal protection for the assets of the business through adequate internal; control and proper insurance coverage.
7. To continuously appraise economic and social forces and government influences, and interpret their effect upon business.

REQUISITES FOR INSTALLATION OF MANAGEMENT ACCOUNTING SYSTEM

Following are the requisites for installation of an effective and efficient Management Accounting System in an organization:

1. Introduction of appropriate organization manual defining therein power, functions, responsibilities and scope of the employees of the organization.
2. Recruitment of adequate number of employees and arrangement of time-to-time proper training for those employees.
3. Classification and codification of accounts.
4. Introduction of sound systems of internal control and internal audit in the organization.
5. Setting up of suitable systems of budgetary control and standard costing technique.
6. Setting up of a suitable system for integrating cost and financial data.
7. Setting up of suitable cost centres and profit centres.
8. Setting up of a suitable system of responsibility accounting.
9. Developing of a sound management information system.
10. Developing of an operational research system in the organization.
11. Preparation of an effective proforma for feedback receiving and managerial report

TOOLS AND TECHNIQUES OF MANAGEMENT ACCOUNTING

1. Analysis of Financial Statements

Analysis of financial statements is the main tool of management accounting. In this tool, we collect four financial statements; one is profit and loss account, second is balance sheet, third is cash flow statement and fourth and last is fund flow statement. After this, we calculate more than 30 ratios and also analyze the financial statement by financial analysis, fund flow analysis and cash flow analysis. Main aims of analysis of financial statements are following:

(a) Profitability

Ability to earn income and sustain growth in both short-term and long-term. A company's degree of profitability is usually based on the income statement, which reports on the company's results of operations;

(b) Solvency

Ability to pay its obligation to creditors and other third parties in the long-term;

(c) Liquidity

Ability to maintain positive cash flow, while satisfying immediate obligations;

(d) Stability

The firm's ability to remain in business in the long run, without having to sustain significant losses in the conduct of its business. Assessing a company's stability requires the use of the income statement and the balance sheet, as well as other financial and non- financial indicators.

2. Budgetary Control

This is that tool of management accounting in which we make budgets for planning and control of fund. All budgets are made with past historical accounting data and future expectations. After this budgeted data is compared with actual recorded accounting data and performance is calculated on the basis of deviation between actual and expected performance.

3. Decision Accounting (Marginal Costing)

There is lot of decision which businessman has to take on the basis of tools of management accounting. One of management accounting tool is decision accounting. It is helpful to take main decision which we can explain following ways:

a) To buy or to construct any fixed asset
b) Do's or Dont's to do any business activity
c) To choose best alternative
d) Calculation of the price of product

4. Throughput Accounting

Throughput Accounting (TA) is a dynamic, integrated, principle-based, and comprehensive management accounting's tool that provides managers with decision support information for enterprise optimization. Actually this is the extension of decision accounting. Throughput accounting is relatively new in management accounting. It is an approach that identifies factors that limit an organization from reaching its goal, and then focuses on simple measures that drive behavior in key areas towards reaching organizational goals.

5. Management Information System

Management Information System (MIS) tool, management accountant provides information needed to manage organizations effectively. If we have to understand MIS, we need to understand ERP, SCM, CRM, DSS and other computer techniques for providing information with effective ways.

6. **Financial Policy**

Financial policy is that tool of management accounting which is needed to make good structure of capital mix we decide the proportion of share capital and loans in capital structure. Financial and operating leverages are also its sub-tools.

7. **Working Capital Management**

With this tool of management accounting, we manage short term assets and short term liabilities. All cash management, debtor management and inventory management will include in working capital management. We make also working capital cycle for knowing the firm's ability to convert its resources into cash. If there is low time for conversion of raw material into sales and then cash from debtor, it is good indication.

COST CONTROL

Cost control is a series of steps that a business uses to maintain proper control over its costs. Implementing this level of control can have a profound positive impact on profits over the long term. The following four steps are associated with cost control:

1. **Create a baseline**. Establish a standard or baseline against which actual costs are to be compared. These standards may be based on historical results, a reasonable improvement on historical results, or the theoretically best attainable cost performance. The middle alternative is generally considered to yield the best results, since it sets an achievable standard.
2. **Calculate a variance**. Calculate the variance between actual results and the standard or baseline noted in the first step. Particular emphasis is placed on the detection of unfavorable variances, which are those actual costs that are higher than expected. If a variance is immaterial, it may not be worthwhile to report the item to management.
3. **Investigate variances**. Conduct a detailed drill-down into the actual cost information to ascertain the reason for an unfavorable variance.
4. **Take action**. Based on the information found in the preceding step, recommend to management whatever corrective actions are needed to reduce the risk of continued unfavorable cost variances.

The preceding steps are only recommended if a company routinely attempts to force its actual costs incurred to closely match its budgeted cost structure. If there is no budget, then an alternative way to practice cost control is to plot individual cost line items from the income statement on a trend line. If there is an unusual spike in the trend line, then the spike is investigated in relation to the average cost level, and corrective action is taken. Thus, operating without a budget eliminates the first two steps in the preceding list of activities, but cost control still requires investigatory work and recommendations to management for corrective action.

The shareholders of a publicly held company are particularly interested in a system of cost control, for they realize that tight cost control gives a company considerable influence over its cash flows and reported profits.

COST REDUCTION

Cost reduction is a planned positive approach to reduce expenditure. It is a corrective function by continuous process of analysis of costs, functions, etc. for further economy in application of factors of production.

DEFINITION

The Chartered Institute of Management Accountants defines Cost Reduction as “Cost reduction is to be understood as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for the use intended or diminution in the quality of the product.”

CHARACTERISTICS OF COST REDUCTION

1. The reduction must be a real one in the course of manufacture or services rendered. Real cost reduction comes through greater productivity. Greater productivity may be through (1) obtaining a large quantity of production from the same facilities; (2) using materials of lower price and of different quality without, however, sacrificing the quality of the finished product, i.e., reducing cost through the process of substitution; (3) simplifying the process of manufacture without sacrificing the quality of the finished product; (4) changing features of the product suitably without sacrificing the quality of the product etc.

2. The reduction must be a permanent one. It is short-lived if it comes through reduction in the prices of inputs, such as materials, labour etc. The reduction should be through improvements in methods of production from research work.
3. The reduction should not be at the cost of essential characteristics, such as quality of the products or services rendered.

Thus, cost reduction must be a genuine one and should aim at the elimination of wasteful elements in methods of doing things. It should not be at the cost of quality. Cost reduction is a continuous process of critically examining various elements of cost and each aspect of the business (i.e. procedures, methods, products, management including market and finance etc.) is critically examined with a view to improving the efficiency for reducing costs.

Every plan of cost reduction proceeds with this assumption that there is always scope for cost reduction. A continuous research is made into various areas for finding out the best possible methods of performance for ensuring minimum possible costs.

The reduction in costs should be real and permanent. Reduction due to wind falls, changes in government policy like a reduction in taxes (or duties or due to temporary) and measures taken for tiding over financial difficulties do not strictly come under the purview of cost reduction.

ADVANTAGES OF COST REDUCTION

1. Cost reduction increases profit: It provides a basis for more dividends to the shareholders, more bonus to the staff and more retention of profit for expansion of the business which will create more employment and overall industrial prospects.
2. Cost reduction will provide more money for labour welfare schemes and thus improve men-management relationship.
3. Cost reduction will help in making goods available to the consumers at cheaper rates. This will create more demand for the products, economies of large scale production, more employment through industrialisation and all-round improvement in the standard of living.

4. Cost reduction will be helpful in meeting competition effectively.
5. Higher profit will provide more revenue to the government by way of taxation.
6. As a result of reduction in cost, export price may be lowered which may increase total exports.
7. Cost reduction is obtained by increasing productivity. Therefore, a developing country, like India, which suffers from shortage of resources can develop faster if it makes the best use of resources by increasing productivity.
8. Cost reduction lays emphasis on a continuous search for improvement which will improve the image of the firm for long-term benefits.

DISADVANTAGES OF COST REDUCTION

1. Quality may be sacrificed at the cost of reduction in cost: To reduce cost, quality may be reduced gradually and it may not be detected till it has assumed alarming proportion. Quality may be reduced to such an extent that it may not be accepted in the market and the business may be lost to the competitors.
2. In the beginning cost reduction programme may not be liked by the employees and danger may be posed to the programme because success of any cost reduction plan depends upon the willing cooperation and active participation of the employees.
3. It is possible that reduction in cost may not be real and permanent. It may not be based on sound reasons and may be short lived and cost may come back to the original cost level when temporary conditions (i.e. fall in prices of materials) due to which cost has reduced disappear.
4. There may be a conflict between individual objective and organisational objective. It is possible that a head of a particular department may follow activities which may reduce the cost of his department but may lead to increase in cost for the organisation as a whole.

COST MANAGEMENT

5. Cost management is the main focus of managerial accounting that helps a firm forecast future expenditures in an effort to reach their budgeting goals. This process is typically divided into three main phases: planning, implementation, and final analysis.

6. In the planning phase, expected costs are projected and approved by higher management. Once the plan has been properly approved, the implementation phase monitors and records the cost making sure that they keep in line with the budget. After the project is finished, actual and budgeted costs are compared and variances are investigated in the final analysis. If the company did not meet their budgeted numbers, management might consider switching production materials, change plant processes, or product design in an effort to lower costs.

The basic concept is to gather information about current operations, analyze it, and evaluate the results. Most managerial accountants strive to:

- Measure the operational costs
- Minimize all non-value added costs if not eliminate them
- See if operations can be run more efficiently and effectively
- Create processes that will work better for future operations

* * * * *

POSSIBLE QUESTIONS

PART A (1 mark)

(Online examinations)

PART B (2 Marks)

1. Define Management Accounting.
2. What is Cost Reduction?
3. What are the elements of Cost?
4. Define Financial Accounting.
5. Define Cost Accounting.

PART C (6 Marks)

1. Explain in detail on advantages and limitations of Management Accounting.
2. Differentiate between Financial and Management Accounting.
3. Define Management Accounting. Explain in detail the functions of Management Accounting.
4. Elucidate in detail on steps involved in installation of Management Accounting.
5. Explain the difference between Cost Accounting and Management Accounting.
6. Elucidate in detail on Scope of Management Accounting.
7. Explicate in detail on tools and techniques of management Accounting.
8. Elucidate in detail on Objectives and Nature of Cost Accounting.

Karpagam Academy of Higher Education
(Deemed University Established Under Section 3 of UGC Act, 1956)
Coimbatore - 641 021.
Management Accounting (16CCU502A)

UNIT 1

S.NO	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
1	The chief objective of management accounting is to serve.	Public at large	Employees	Management	Government	Management
2	The term management accounting was first coined by the British team of	USA	China	India	Japan	USA
3	Management accounting involves	Recording of costs	Recording of transaction	Preparation of accounts	Analysis and interpretation of data	Analysis and interpretation of
4	Management accounting is also known as	Cost accounting	Financial accounting	Corporate accounting	Decision accounting.	Decision accounting.
5	Management accounting functions are	Complementary in nature	Contradictory nature	Neutral in effect	None of the above	Complementary in nature
6	Management accounting provides valuable services to management in	Planning functions	Controlling functions	Co-ordinating functions	All managerial functions.	All managerial functions.
7	Management accounting is	An extension of financial	An extension of cost accounting.	A blend of these two and of financial	all the above	An extension of financial
8	Management accounting is concerned with formulation of _______ to meet	Plans	Cost	Both a and b	decision	Plans
9	Installation of management accounting is purely.	Compulsory	Optional	Both a and b	not necessary	Optional
10	The term of appointment of financial controller may be fixed by the	Board of Directors	Articles of association	Both a and b	Prospectus	Both a and b

11	Financial accounting deals with	Determination of costs	Determination of profits	Determination of prices	Determination of Expenses	Determination of profits
12	The term management accountancy was first used in	1910	1939	1950	1970	1950
13	Preparation of financial accounts is compulsory for	Sole trader business	Partnership firm	Join stock companies	Hindu Undivided Family	Join stock companies
14	A financial statement is outcome of _______ accounting	Cost	Management	Financial	Accounting	Financial
15	Provision of accounting information is known as	Reporting	Budgeting	Planning	Controlling	Reporting
16	______is the oldest branch of accounting.	Management accounting	Cost accounting	Financial accounting	Corporate accounting.	Financial accounting
17	Management accounting also comprises the preparation of financial	Share holders	Creditors	Tax authorities	All of the above	All of the above
18	Information conveyed by the management accountant to the	Reliable	Valuable to the recipient	Relevant	All of the above	All of the above
19	Management accounting and cost accounting are	Supplementary to each other	Complementary to each other	Independent to each other	Opposite to each other	Complementary to each other
20	____ is also known as Management oriented accounting.	Management accounting	Cost accounting	Financial accounting	Corporate accounting	Management accounting
21	_____Is concerned with accounting information which is useful to	Management accounting	Cost accounting	Financial accounting	Corporate accounting	Management accounting
22	________Is concern with future.	Forecasting	Supply information	Increase in efficiency	Planning	Forecasting
23	________ Provides information to the management and not decisions.	Forecasting	Supply information	Increase in efficiency	Receiving Information	Supply information
24	_____Is basically concerned with "the problem of choice".	Forecasting	Supply information	Increase in efficiency	Receiving Information	Increase in efficiency

25	_____To makes accounting data more useful.	Techniques and concepts	Cause and effect analysis	No fixed norms	Assists management	Techniques and concepts
26	_____ Attempts to examine the 'cause' and 'effect' of different	Techniques and concepts	Cause and effect analysis	No fixed norms	Assist management	Cause and effect analysis
27	_____ has no set of rules and formats like double entry system of book	Techniques and concepts	Cause and effect analysis	No fixed norms	Assist management.	No fixed norms
28	_____ in several ways in its functions but does not replace it.	Cause and effect analysis	No fixed norms	Assist management	Achieving of objectives	Assist management
29	______ is the general accounting which relates to the recording of	Financial accounting	Cost accounting	Management accounting	Budgeting.	Financial accounting
30	_____is the process and techniques of ascertaining costs.	Management accounting	Financial accounting	Cost accounting	Budgeting	Cost accounting
31	_____ Means expressing the plans, policies and goals of the enterprise for	Budgeting	Forecasting	Statistical methods	Inventory control	Budgeting
32	-------------- tools such as graphs, charts, diagrams, pictorial	Budgeting	Forecasting	statistical	inventory control	statistical
33	------------- on the other hand, is a predication of what will happen, as a	Budgeting	Forecasting	Statistical	Inventory control	Forecasting
34	----------------- Includes control over inventory from the time it is acquired	Budgeting	Forecasting	Statistical	Inventory control	Inventory control
35	--------------- is important part of management accounting	Budgeting	Statistical	Inventory control	Interpretation of data	Interpretation of data
36	---------------------May be sent monthly quarterly half yearly etc.	Report	Internal audit	Tax accounting	Methods and procedure	Report
37	--------------- Needs devising a system of internal control by establishing	Report	Internal audit	Tax accounting report	Methods and procedure	Internal audit
38	-----------------includes the computation of taxable income as per	Report	Internal audit	Tax accounting report	Internal audit	Tax accounting report

39	-----------------provides statistical data to the various departments of the	Report	Internal audit	Tax accounting	Methods and procedure	Methods and procedure
40	The primary objective of----------------- is to enable the management to	Cost accounting	financial accounting	management accounting	Corporate Accounting	management accounting
41	---------------------- is one of the primary function s of management	Planning	budgeting	Forecasting	Controlling	Planning
42	The main objective of management accounting is to present------------------	Cost	Financial	Management	Accounting	Financial
43	Management accounting makes------------------ process more modern and	Forecasting	Planning	Decision making	Budgeting	Decision making
44	Management accounting is a useful advice of managerial --------------------	Planning	Control	Motivation	Forecasting	Control
45	-------------------- Presents the different alternative plans before the	Reporting	Motivating	Controlling	Forecasting	Reporting
46	----------------- Increases the job satisfaction of employees and	Delegation	Motivation	Report	Directing	Delegation
47	----------------provides tools which are helpful in co ordination the activities	Planning	Forecasting	co- ordination	Budgeting	co- ordination
48	Increase the effectives of the organization and -------------------the	Delegation	Motivation	Report	Directing	Motivation
49	Return on capital employed is one of the tools of -------------	Financial accounting	Cost accounting	Corporate accounting	Management accounting	Management accounting
50	Budget are important means of -----------------	Motivation	Delegation	co- ordination	Directing	co- ordination
51	---------------- is a part of accounting	Management accounting	Financial accounting	cost accounting	corporate accounting	Management accounting
52	The-------------- in similar groups make the data more useful and	Modification of data	Planning and forecasting	Financial analysis and interpretation	Communication	Modification of data

53	-------------- are essential for achieving business objectives	Modification of data	Planning and forecasting	Communication	Decision Making	Planning and forecasting
54	The ____ is most important function of management accounting.	Motivation	Delegation	Co-ordination	Interpretation	Interpretation
55	_____ of data are considered as back bone of management accounting.	modification of data	analysis and interpretation	communication	co-ordination	analysis and interpretation
56	Management accounting is an important medium of _______	Motivation	Co-ordination	Communication	Delegation	Communication
57	Mere financial data and its analysis and interpretation are not sufficient for	Planning	Forecasting	Controlling	Decision-making	Decision-making
58	_____ supplies analytical information regarding various alternatives and the	financial accounting	management accounting	cost accounting	corporate accounting	management accounting
59	____ is the essence of managerial activity.	Co-ordination	Control	Motivation	Decision making	Co-ordination
60	________ has more or less become compulsory or statutory for every	financial accounting	cost accounting	management accounting	none of the above	financial accounting

UNIT-II

SYLLABUS

Analysis and Interpretation of Financial Statements - Meaning – types of financial analysis – comparative statements – common size statements, - trend analysis. Ratio Analysis, meaning, objective, limitation, classification, computation and interpretation, liquidity, leverage activity and profitability ratios. Return on Capital employed computation and uses.

INTRODUCTION

Financial statements by themselves do not give the required information both for internal management and for outsiders. They are passive statements showing the results of the business i.e. profit or loss and the financial position of the business. They will not disclose any reasons for dismal performance of the business if it is so. What is wrong with the business, where it went wrong, why it went wrong, etc. are some of the questions for which no answers will be available in the financial statements. Similarly no information will be available in the financial statements about the financial strengths and weaknesses of the concern. Hence to get meaningful information from the financial statements which would facilitate vital decisions to be taken, financial statements must be analysed and interpreted. Through the analysis and interpretation of financial statements full diagnosis of the profitability and financial soundness of the business is made possible. The term 'analysis of financial statements' means methodical classification of the data given in the financial statements. The term 'interpretation of financial statements' means explaining the meaning and significance of the data so classified. A number of tools are available for the purpose of analysing and interpreting the financial statements.

MEANING OF ANALYSIS OF FINANCIAL STATEMENTS

An analysis is the process of critically examining in detail accounting information given in the financial statements. For the purpose of analysis, individual items are studied, their interrelationships with other related figures are established, the data is sometimes rearranged to have better understanding of the information with the help of different techniques or tools for the purpose. Analysing financial statements is a process of evaluating relationship between component parts of financial statements to obtain a better understanding of firm's position and performance. The analysis of financial statements thus refers to the treatment of the information contained in the financial statements in a way so as to afford a full diagnosis of the profitability and financial position of the firm concerned. For this purpose financial statements are classified methodically, analysed and compared with the figures of previous years or other similar firms.

MEANING OF INTERPRETATION

Analysis and interpretation are closely related. Interpretation is not possible without analysis and without interpretation analysis has not value. Various account balances appear in the financial statements. These account balances do not represent homogeneous data so it is difficult to interpret them and draw some conclusions. This requires an analysis of the data in the financial statements so as to bring some homogeneity to the figures shown in the financial statements. Interpretation is thus drawing of inference and stating what the figures in the financial statements really mean. Interpretation is dependent on interpreter himself. Interpreter must have experience, understanding and intelligence to draw correct conclusions from the analysed data.

TYPES OF FINANCIAL STATEMENTS

A financial statement is an organized collection of data according to logical and consistent accounting procedures. Its purpose is to convey an understanding of some financial aspects of a business firm. It may show a position at a moment of time as in the case of a balance sheet, or may reveal a series of activities over a given period of time, as in the case of an Income Statement.

Thus, the term 'financial statements' generally refers to two basic statements: (i) the Income Statement and (ii) the Balance Sheet. A business may also prepare (iii) a Statement of Retained Earnings, and (iv) a Statement of Changes in Financial Position in addition to the above two statements.

The meaning and significance of each of these statements is being explained below:

1. Income Statement

The Income statement (also termed as Profit and Loss Account) is generally considered to be the most useful of all financial statements. It explains what has happened to a business as a result of operations between two balance sheet dates. For this purpose it matches the revenues and costs incurred in the process of earning revenues and shows the net profit earned or less suffered during a particular period.

The nature of the 'Income' which is the focus of the Income Statement can be well understood if a business is taken as an organization that uses 'inputs' to 'produce' output. The outputs are the goods and services that the business provides to its customers. The values of these outputs are the amounts paid by the customers for them. These amounts are called 'revenues' in accounting. The inputs are the economic resources used by the business in providing these goods and services. These are termed as 'expenses' in accounting.

2. Balance Sheet

It is a statement of financial position of a business at a specified moment of time. It represents all assets owned by the business at a particular moment of time and the claims of the owners at outsiders against those assets at that time. It is in a way a snapshot of the financial condition of the business at that time.

The important distinction between an income statement and a Balance Sheet is that the Income Statement is for a period while Balance Sheet is on a particular date. Income Statement is, therefore, a flow report, as contrasted with the Balance Sheet which is a static report. However both are complementary to each other.

3. Statement of Retained Earnings

The term retained earnings means the accumulated excess of earnings over losses and dividends. The balance shown by the Income Statement is transferred to the Balance Sheet through this statement, after making necessary appropriations. It is thus a connecting link between the Balance Sheet and the Income Statement. It is fundamentally a display of things that have caused the beginning of the period retained earnings balance to be changed into the one shown in the end- of the period balance sheet. The statement is also termed as Profit and Loss Appropriation Account in case of companies.

4. Statement of Changes in Financial Position

The Balance Sheet shows the financial condition of the business at a particular moment of time while the Income Statement discloses the results of operations of business over a period of time. However, for a better understanding of the affairs of the business, it is essential to identify the movement of working capital or cash in and out of the business. This information is available in the statement of changes in financial position of the business. The statement may emphasize any of the following aspects relating to change in financial position of the business.

i. Changes in Working Capital Position

In such a case the statement is termed as SCFP (Working Capital basis) or popularly Funds Flow Statement.

ii. Change in Cash Position

In such a case the statement is termed as SCFP (Cash basis) or popularly Cash Flow Statement.

iii. Change in Overall Financial Position

In such a case the statement is termed simply as Statement of Changes in Financial Position (SCFP).

ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS

Financial Statements are indicators of the two significant factors: (i) Profitability and (ii) Financial Soundness,

Analysis and interpretation of financial statements, therefore, refers to such a treatment of the information contained in the Income Statement and the Balance Sheet so as to afford full diagnosis o f the profitability and financial soundness of the business. .

A distinction here can be made between the two terms - 'Analysis' and interpretation . The term' Analysis' means methodical classification of the data given in the financial statements. The figures given in the financial statements will not help one unless they are put in a simplified form. For example, all items relating to 'Current Assets' are put at one place while all items relating to 'Current Liabilities' are put at another place. The term 'Interpretation' means explaining the meaning and significance of the data so simplified. However, both' Analysis' and 'Interpretation are complementary to each other. Interpretation requires Analysis, while Analysis is useless without Interpretation. Most of the authors have used the term' Analysis' only to cover the meanings of both analysis and interpretation, since analysis involves interpretation According to Myres, "Financial statement analysis is largely a study o f the relationship among the various financial factors in a business as disclosed by a single set of statements and a study of the trend of these factors as shown in a series of statements." For the sake of convenience, we have also used the term 'Financial Statement Analysis' throughout the chapter to cover both analysis and interpretation'.

Types of Financial Analysis

Financial Analysis can be classified into different categories depending upon (i) the material used, and (ii) the modus operandi of analysis.

1. On the Basis of Material Used

According to this basis, financial analysis can be of two types:

a. External Analysis

This analysis is done by those who are outsiders for the business. The term outsiders include investors, credit agencies, government agencies and other creditors who have no access to the internal records of the company. These persons mainly depend upon the published financial statements. Their analysis serves only a limited purpose. The position of, these analysts has improved in recent times on account of increased governmental control over companies and governmental regulations requiring more detailed disclosure of information by the companies in their financial statements.

b. Internal Analysis

This analysis is done by persons who have access to the books of account and other information related to the business. Such an analysis can, therefore, be done by executives and employees of the organization or by officers appointed for this purpose by the Government or the Court under powers vested in them. The analysis is done depending upon the objective to be achieved through this analysis.

2. On the basis of Modus Operandi

According to this, financial analysis can also be of two types:

i. Horizontal Analysis

In case of this type of analysis, financial statements for a number of years are reviewed and analyzed. The current year's figures are compared with the standard or base year. The analysis statement usually contains figures for two or more years and the changes are shown regarding each item from the base year usually in the forma of percentage. Such an analysis gives the management considerable insight into levels and areas of strength and weakness. Since this type of analysis is based on the data from year to year rather than on one date, it is also tern as 'Dynamic Analysis'.

ii. Vertical Analysis

In case of this type of analysis a study is made of the quantitative relationship of the various items in the financial Statements on a particular date. For example, the ratios of different items of costs for a particular period may be calculated with the sales for that period. Such an analysis is useful in comparing the performance of several companies in the same group', or divisio ns or department in the same company. Since this analysis depends on the data for one period, this is not very conducive to a proper analysis of the company's financial position. It is also called 'Static Analysis' as it is frequently used for referring to ratios developed on one date or for one accounting period.

Steps involved in Financial Statement Analysis

The analysis of the financial statements requires:

- ❖ Methodical classification of the data given in the financial statements.
- ❖ Comparison of the various inter-connected figures with each other by different "Tools of Financial Analysis"

TECHNIQUES OF FINANCIAL ANALYSIS

A financial analyst can adopt one or more of the following techniques/tools of financial analysis:

1. Comparative Financial Statements

Comparative financial statements are those statements which have been designed in a way so as to provide time perspective to the consideration of various elements of financial position embodied in such statements. In these statements figures for two or more periods are placed side by side to facilitate comparison. Both the Income Statement and Balance Sheet can be prepared in the form of Comparative Financial Statements.

a. Comparative Income Statement

The Income Statement discloses Net Profit or Net Loss on account of operations. A Comparative Income Statement will show the absolute figures for two or more periods, the absolute change fro m one period to another and, if desired, the change in terms of percentages. Since the figures for two or more periods are shown side by side, the reader can quickly ascertain whether sales have increased or decreased, whether cost of sales has increased or decreased, etc. Thus, only a reading of data included in Comparative Income Statements will be helpful in deriving meaningful conclusions.

b. Comparative Balance Sheet

Comparative Balance Sheet as on two or more different dates can be used for comparing assets and liabilities and finding out any increase or decrease in those items. Thus; while in a single Balance Sheet the emphasis is on present position, it is on change in the comparative Balance Sheet. Such a Balance Sheet is very useful in studying the trends in an enterprise.

Comparative Financial Statements can be prepared for more than two periods or more than two dates. However, it becomes very cumbersome to study the trend with more than two period's data. Trend percentages are more useful in such cases.

The American Institute of Certified Public Accountants has explained the utility of repairing the Comparative Financial Statements as follows:

The presentation of co mparative financial statements is annual and other reports enhances the usefulness of such reports and brings out more clearly the nature and trend of rent changes affecting the enterprise. Such presentation emphasizes the fact that statement for a series of periods is far more significant than those of a single period and that the accounts of one period are but an installment of what is essentially a continuous history. In anyone year, it is ordinarily desired that the Balance Sheet, the Inco me Statement and the Surplus Statement be given for one or more preceding years as well as for the current year".

The utility of preparing the Comparative Financial Statements has also been realized in our country. The Companies Act, 1956, provides that companies should give figures for different items for the previous period, together with Current period figures in their Profit and loss Account and Balance Sheet.

2.Common Size Financial Statements

Common-size Financial Statements are those in which figures reported are converted into percentages to some common base. In the Income Statement the sale figure is assumed to be 100 and all figures are expressed as a percentage of this total.

3. Trend Percentages

Trend percentages are immensely helpful in making a comparative study of the financial statements for several years. The method of calculating trend percentages involves the calculation of percentage relationship that each item bears to the same item in the base year. Any year may be taken as the base year. It is usually the earliest year. Any intervening year may also be taken as the base year. Each item of base year taken as 100 and on that basis the percentages for each of the items of each of the fears is calculated. These percentages can also be taken as Index Numbers showing relative changes in the financial data resulting with the passage of time.

4. Fund Flow Analysis

Funds flow analysis has beco me an important tool in the analytical kit of financial analysts, credit granting institutions and financial managers. This is because the Balance Sheet of a business reveals its financial status at a particular point of time. It does not sharply focus those major financial transactions which have been behind the Balance Sheet changes. For example, if a loan of Rs.2, 00,000 was raised and pail during the accounting year, the balance sheet will not depict this transaction However, a financial analyst must know the purpose for which the loan was utilized and the source from which it was obtained. This will help him in making a better estimate about the company's financial position and policies.

5. Cost-Volume Profit Analysis

Cost-Volume-Profit Analysis is an important tool of profit planning. It studies the relationship between cost, volume of production, sales and profit. Of course, it is not strictly a technique used for analysis of financial statements. However, it is an important tool for the management for decision- making since the data is provided by both cost and financial records. It tells the volume of sales at which firm will break-even, the effect on profit on 'account of variation in output, selling price and cost, and finally, the quantity to be produced and so ld to reach the, target profit level.

6.Ratio Analysis

This is the most important tool available tofinancial analysts for their work. An accounting ratio shows the relationship in mathematical terms between two interrelated accounting figures. The figures have to be interrelated (e.g., Gross Profit and Sales, Current Assets and Current Liabilities), because no useful purpose will be served if ratios are calculated between two figures which are not at all related to each other, e.g., sales and discount on issue of debentures.

LIMITATIONS OF FINANCIAL ANALYSIS

Financial analysis is a powerful mechanism which helps in ascertaining the strengths and weaknesses in the operations and financial position of an enterprise. However, this analysis is subject to certain limitations. Most of these limitations are because of the limitations of the financial statements themselves. These limitations are as follows:

1. Financial Analysis is only a Means

Financial analysis is a means to an end and not the end itself. The analysis should be used as a starting point and the conclusion should be drawn not in isolation, but keeping view the overall picture and the prevailing economic and political situation.

2. Ignores Price Level Changes

Financial statements are normally prepared on the concept of historical costs. They do not reflect values in terms of current costs. Thus, the financial analysis based on such financial statements or accounting figures would not portray the effects of price level changes over the period.

3. Financial Statements are Essentially Interim Reports

The profit shown by Profit and Loss Account and the financial position as depicted by the Balance Sheet is not exact. The exact position can be known only when the business is closed down. Again, the existence of contingent liabilities and deferred revenue expenditure make them more imprecise.

4. Accounting Concepts and Conventions

Financial statements are prepared on the basis of certain accounting concept and conventions. On account of this reason the financial position as disclosed by statements may not be realistic. For' example, fixed assets in the balance sheet, shown on the basis of going concern concept. This means that value placed on& assets may not be the same which may be realized on their sale. On account convention of conservatism the income statement may not disclose true income of the business since probable losses are considered while probable incomes are ignored.

5. Influence of Personnel Judgement

Many items are left to the personal judgment of the accountant. For example, the method of depreciation, mode of amortization of fixed assets, treatment of deferred revenue expenditure - all depend on the personal judgment of the accountant. The soundness of such judgment will necessarily depend upon his competence and integrity. However convention of consistency acts as a controlling factor on making indiscreet personal judgments.

6. Disclose only Monetary Facts

Financial statements do not depict those facts which cannot be expressed in terms of money. For example, development of a team of loyal and efficient workers, enlightened management, the reputation and prestige of management with the public are matters which are of considerable importance for the business, but they are nowhere depicted by financial statements.

RATIO ANALYSIS

Ratio Analysis is a very important tool o f financial analysis. It is the process of establishing a significant relationship between the items o f financial statements to provide a meaningful understanding of the performance and financial position of a firm. In view of the requirements of various users (e.g., Short-term Creditors, Long- term Creditors, Management, Investors) of the ratios, one may classify the ratios into the following four groups:

1. Liquidity Ratios

These ratios measure the concern's ability to meet short-term obligations as and when they become due. These ratios show the short- term financial solvency of the concern. Usually the following two ratios are calculated for this purpose:

a. Current Ratio

Meaning

This ratio establishes a relationship between current assets and current liabilities.

Objective

The objective of computing this ratio is to measure the ability of the firm to meet its short- term obligations and to reflect the short-term financial strength / solvency of a firm. In other words, the objective is to measure the safety margin available for short-term creditors.

Components

There are two components of this ratio which are a under:

(i) Current Assets which mean the assets which are held for their conversion into cash within a year and include the following:

Cash Balance	Bank Balances
Marketable Securities	Debtors
Bills Receivable	Stock of all Types
Prepaid Expenses	Work-in-Progress, Finished Goods
Income accrued but not due	Short-term Loans and Advances
Advance Payment of Tax	Income due but not received

(ii) Current Liabilities which mean the liabilities which are expected to be matured within a year and include the following:

Creditors for Goods	Creditor for Expenses
Bills Payable	Bank Overdraft
Short-term Loans and Advances	Income received-in-advance
Provision for Tax	Unclaimed Dividend

Computation

This ratio is computed by dividing the current assets by the current liabilities. This ratio is usually expressed as a pure ratio e.g. 2:I. In the form of a formula, this ratio may be expressed as under:

Current Ratio = Current Assets / Current Liabilities

Interpretation

It indicates rupees of current assets available for each rupee of current liability, Higher the ratio, greater the margin of safety for short-term creditors and vice-versa. However, too high

/ too low ratio calls for further investigation since the too high ratio may indicate the presence of idle funds with the firm or the absence of investment opportunities with the firm and too low ratio may indicate the over trading/under capitalization if the capital turnover ratio is high.

Traditionally, a current ratio of 2: 1 is considered to be a satisfactory ratio. On the basis of this traditional rule, if the current ratio is 2 or more, it means the firm is adequately liquid and has the ability to meet its current obligations but if the current ratio is less than 2, it means the firm has difficulty in meeting its current obligations. The logic behind this rule is that even if the value of current assets becomes half, the firm can still meet its short-term obligations.

However, the traditional standard of 2: I should not be used blindly since there may be firms having current ratio of less than 2, which are working efficiently and meeting their short-term obligations as and when they become due while the other firms having current ratio of more than 2, may not be able to meet their current obligations in time. This is so because the current ratio measures the quantity of current assets and not their quality. Current assets may consist of doubtful and slow paying debtors and slow moving and obsolete stock of goods. That is why, it can be said that current ratio is no doubt a quick measurement of a firm's liquidity but it is crude as well.

Precaution

While computing and using the current ratio, it must be ensured (a) that the quality o f both receivables (debtors and bills receivable) and inventory has been carefully assessed and (b) that all current assets and current liabilities have been properly valued.

2. Quick Ratio

Meaning

This ratio establishes a: relationship between quick assets and current liabilities.

Objective

The objective of computing this ratio is to measure the ability of the firm to meet its short-term obligations as and when due without relying upon the realization of stock.

Components

There are two components of this ratio which are as under:

(i) Quick Assets which mean those current assets which can be converted into cash immediately or at a short notice without a loss of value and include the following:

Cash Balances	Bank Balances
Marketable Securities	Debtors
Bills Receivable	Short-term Loans and Advances

Computation

This ratio is computed by dividing the quick assets by the current liabilities. This ratio is usually expressed as a pure ratio e.g., 1: 1. In the form of a formula, this ratio may be expressed as under:

Quick Ratio = Quick Assets / Quick Liabilities

Interpretation

It indicates rupees of quick assets available for each rupee of current liability. Traditionally, a quick ratio of 1:1 is considered to be a satisfactory ratio. However, this traditional rule should not be used blindly since a firm having a quick ratio of more than 1, may not be meeting its short -term obligations in time if its current assets consist of doubtful and slow paying debtors while a firm having a quick ratio of less than 1, may be meeting its short-term obligations in time because of its very efficient inventory management.

Precaution

While computing and using the quick ratio, it must be ensured, (a) that the quality of the receivables (debtors and bills receivable) has been carefully assessed and (b) that all quick assets and current liabilities have been properly valued.

SOLVENCY RATIOS

These ratios show the long- term financial solvency and measure the enterprise's ability to pay the interest regularly and to repay the principal (i.e. Capital amount) on maturity or in pre-determined installments at due dates. Usually, the following ratios are calculated to judge the long-term financial solvency of the concern.

Debt Equity Ratios

This ratio establishes a relationship between long- term debts and share-holders' funds.

Objective

The objective of computing this ratio is to measure the relative proportion of debt and equity in financing the assets of a firm.

Components

There are two components of this ratio, which are as under:

(i) Long-term Debts, which mean long- term loans (whether secured or unsecured (e.g., Debentures, bonds, loans from financial institutions).

(ii) Shareholders' Funds which mean equity share capital plus preference share capital plus reserves and surplus minus fictitious assets (e.g., preliminary expenses).

Computation

This ratio is computed by dividing the long-term debts by the shareholders' funds. This ratio is usually expressed as a pure ratio e.g., 2: 1. In the form of a formula, this ratio may be expressed as under:

Debt-Equity Ratio = Long term Debts/ Shareholders Funds

Interpretation

It indicates the margin of safety to long-term creditors. A low debt equities ratio implies the use of more equity than debt which means a larger safety margin for creditors since owner's equity is treated as a margin of safety by creditors and vice versa.

Debt Total Funds Ratio

This ratio is a variation of the debt-equity ratio and gives the similar indications as the debt-equity ratio. In this ratio, the outside long-term liabilities are related to the total capitalization of the firm and not merely to the shareholders' funds. This ratio is computed by dividing the long-term debt by the capital employed. In the form of a formula, this ratio may be expressed as under:

Debt Total Funds Ratio = Capital Employed / Long-term Debt

Where, the Capital Employed comprises the long- term debt and the shareholders' funds.

Interest Coverage Ratio (or Time-interest Earned Ratio or Debt-Service Ratio)

Meaning

This ratio establishes a relationship between net profits before interest and taxes and interest on long- term debt.

Objective

The objective of computing this ratio is to measure the debt- servicing capacity of a firm so far as fixed interest on long-term debt is concerned.

Components

There are two components of this ratio which are as under:

(i) Net Profit before Interest and Tax

(ii) Interest on Long-term Debts

Computation

This ratio is computed by dividing the net profits before interest and taxes by interest on long-term debt. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under:

Interest Coverage Ratio = Net Profit before Interest and Tax / Interest on Long-term Debt

Interpretation

Interest coverage ratio shows the number of times the interest charges are covered by the profits out of which they will be paid. It indicates the limit beyond which the ability of the firm to service its debt would be adversely affected. For instance, an interest coverage of five times would imply that even if the firm's net profits before interest and tax were to decline to 20% of the present level, the firm will still be able to pay interest out of profits. Higher the ratio, greater the firm's ability to pay interest but very high ratio may imply lesser use of debt and/or very efficient operations.

ACTIVITY RATIOS

These ratios measure the effectiveness with which a firm uses its available resources. These ratios are also called 'Turnover Ratios' since they indicate the speed with which the resources are being turned (or converted) into sales.

Usually the following turnover ratios are calculated:

1. Capital Turnover Ratio
2. Fixed Assets Turnover Ratio,
3. Net Working Capital Turnover Ratio
4. Stock Turnover Ratio
5. Debtors Turnover Ratio
6. Creditors Turnover Ratio.

Capital Turnover Ratio

Meaning

This ratio establishes a relationship between net sales and capital employed.

Objective

The objective of computing this ratio is to determine the efficiency with which the capital employed is utilized.

Components

There are two components of this ratio which are as under:

(i) Net Sales which mean Gross Sales minus Sales Returns and

(ii) Capital Employed which means Long-term Debt plus Shareholders' Funds

Computation

This ratio is computed by dividing the net sales by the capital employed. This ratio is usually expressed as 'x' number of times. In the form of a formula this ratio may be expressed as under:

Capital Turnover Ratio = Net Sales / Capital Employed

Interpretation

It indicates the firm's ability to generate sales per rupee of capital employed. In general, the higher the ratio the more efficient the management and utilization of capital employed. A too high ratio may indicate the situation of an over-trading (or under. capitalization) if current ratio is lower than that required reasonably and vice versa.

Fixed Assets Turnover Ratio

Meaning

This ratio establishes a relationship between net sales and fixed assets.

Objective

The objective of computing this ratio is to determine the efficiency with which the fixed assets are utilized.

Components

There are two components of this ratio which are as under:

(i) Net Sales which means Gross Sales minus Sales Returns

(ii) Net Fixed (Operating) Assets which mean gross fixed assets minus depreciation thereon.

Computation

This ratio is computed by dividing the net sales by the net fixed assets. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under:

Fixed Assets Turnover Ratio = Net Sales / Net Fixed Assets

Interpretation

It indicates the firm's ability to generate sales per rupee of investment in fixed assets. In general, higher the ratio, the more efficient the management and utilization of fixed assets, and vice versa. It may be noted that there is no direct relationship between sales and fixed assets since the sales are influenced by other factors as well (e.g., quality of product, delivery terms, credit terms, after sales service, advertisement and publicities.)

Working Capital Turnover Ratio

Meaning

This ratio establishes a relationship between net sales and working capital.

Objective

The objective of computing this ratio is to determine the efficiency with which the working capital is utilized.

Components

There are two components of this ratio which are as under:

(i) Net Sales which mean Gross Sales minus Sales Return and

(ii) Working Capital which means Current Assets minus Current Liabilities

Computation

This ratio is computed by dividing the net sales by the working capital. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under:

Working Capital Turnover Ratio = Net Sales / Working Capital

Interpretation

It indicates the firm's ability to generate sales per rupee of working capital. In general, higher the ratio, the more efficient the management and utilization of working capital and vice versa.

Stock Turnover Ratio

Meaning

This ratio establishes a relationship between costs of goods sold and average inventory.

Objective

The objective of computing this ratio is to determine the efficiency with which the inventory is utilized.

Components

There are two components of this ratio which are as under: (i) Cost of Goods Sold, this is calculated as under.

Cost of Goods Sold = Opening Inventory + Net Purchases + Direct Expenses – Closing

Inventory = Net Sales – Gross Profit

(ii) Average Inventory which is calculated as Under:

(c) Components: There are two components of this ratio which are as under: (i) Cost of Goods Sold, this is calculated as under.

Average Inventory = (Opening Inventory plus Closing Inventory)/2

Computation

This ratio is computed by dividing the cost of goods sold by the average inventory. This ratio is usually expressed as 'x' number of times. In the form of a formula, this ratio may be expressed as under: -

Stock Turnover Ratio = Cost of Goods Sold / Average Inventory

Interpretation

It indicates the speed with which the inventory is converted into sales. In general, a high ratio indicates efficient performance since an improvement in the ratio shows that either the same vo lume of sales has been maintained with a lower investment in stocks, or the volume of sales has increased without any increase in the amount of stocks. However, too high ratio and too low ratio calls for further investigation. A too high ratio may be the result of a very low inventory levels which may result in frequent stock-outs and thus the firm may incur high stock-out costs. On the other hand, a too low ratio may be the result of excessive inventory levels, slow-moving or obsolete inventory and thus, the firm may incur high carrying costs. Thus, a firm should have neither a very high nor a very low stock turnover ratio, it should have satisfactory level. To judge whether the ratio is satisfactory or not, it should be compared with its own past ratios or with the ratio of similar firms in the same industry or with industry average.

Stock Velocity

This velocity indicates the period for which sales can be generated with the help of an average stock maintained and is usually expressed in days. This velocity may be calculated as follows:

Stock Velocity = Average Stock / Average Daily Cost of Goods Sold (OR)

= 12 Months / 52 Weeks / 365 Days / Stock Turnover Ratio

With the help of above illustration Calculate Stock Velocity ratio.

Stock Velocity=12/2= 5

Profitability Ratios

The capacity of a business concern to earn profit can be termed as profitability. Thus, profit earning can be ascertained on the basis of the volume of profit margin of any activity and is calculated by subtracting costs from the total Revenue accruing to a firm during a particular period. The overall efficiency or performance of a business can be ascertained with the help of profitability ratios

Gross Profit Ratio

Operating Ratio

Operating Profit Ratio

Net Profit Ratio

Return on Investment Ratio

Return on Capital Employed Ratio

Earnings Per Share Ratio

Dividend Payout Ratio

Dividend Yield Ratio

Price Earnings Ratio

Net Profit to Net worth Ratio

1. Gross Profit Ratio

Gross Profit Ratio is the formative component in relationship between gross profit and net sales. Higher Gross Profit Ratio is a precursor to the business concern that the firm has higher profitability. It is also reflective of the standard of performance of firm's business apropos to its effectiveness.

Gross Profit Ratio = Gross Profit / Net Sales X 100

2. Operating Ratio

Operating Ratio measures the relationship between total operating expenses and sales. The total operating expenses is the sum total of cost of goods sold, office and administrative expenses and selling and distribution expenses. This ratio equips the firm with the ability to cover total operating expenses.

Operating Ratio = Operating Cost / Net Sales X 100

3. Operating Profit Ratio

It indicates the operational efficiency of the firm and is a measure of the firm’s ability to cover the total operating expenses.

Operating Profit Ratio = Operating Profit / Net Sales X 100

4. Net Profit Ratio

This ratio tells us the overall efficiency in operating the business. It is used to measure the relationship between net profit and sales. It includes non-operating incomes and profits.

Net Profit Ratio = Net Profit after Tax / Net Sales X 100

5. Return on Investment Ratio

This ratio measures a return on owner's or shareholders' investment. It establishes the relationship between net profit after interest and taxes and the owner investment.

Return on Investment Ratio = Net Profit after Interest & Taxes / Shareholder fund or Investment X 100

6. Return on Capital Employed Ratio

It measures the relationship between profit and capital employed. Return means profits or net profits. Capital employed means total investment made in the business.

Return on Capital Employed = Net Profit after Taxes/ Gross Capital Employed X 100

7. Earnings Per Ratio

It measures the earning capacity of the firm from the owners view and helps in determining the price of the equity share in the market.

Earning Per Ratio = Net Profit after Tax and Preference Dividend / No of Equity Share

8. Dividend Payout Ratio

It is the relationship between payment of dividend on equity share capital and the profits available after meeting tax and preference dividend. Indication of the dividend policy, as incorporated by the top management is underlined by this ratio. It highlights the utilization of divisible profit to pay dividend or pertaining to the retention of both.

Dividend Payout Ratio = Equity Dividend / Net Profit after Tax & Preference Dividend X 100

9. Dividend Yield Ratio

It is the relationship is established between dividend per share and market value per share. This ratio is a major factor that determines the dividend income from the investor point of view.

Dividend Yield Ratio = Dividend Per Share / Market Value Per Share X 100

10. Price Earnings Ratio

It highlights the earning per share reflected by market share. It establishes the relationship between the market price of an equity share and the earning per equity share. It helps to find out whether the equity shares of a company are undervalued or not. It is also useful in financial forecasting.

Price Earnings Ratio = Market Price per Equity Share / Earning Per Share

11. Net Profit to Net Worth Ratio

It measures the profit return on investment. It indicates the established relationship between net profit and shareholders net worth.

Net Profit to Net Worth Ratio = Net Profit After Taxes / Shareholders Net Worth X 100

ADVANTAGES OF RATIO ANALYSIS

Ratio analysis is very useful tool of management accounting. With this, we can analyze business's financial position. We also check company's short term and long term solvency with ratio analysis. Following are the main advantages of ratio analysis.

1. Helpful in Decision Making

All our financial statements are made for providing information. But this information is not helpful for decision making because financial statements provide only raw information. When we calculate different ratios in ratio analysis, at that time, we get useful information. I can explain it with simple example. Suppose, we calculate our interest coverage ratio which is 10times but our competitor company's interest coverage ratio is 15 times. It means capacity of the profit of our competitor company is more than us. By seeing this, we can take decisions for increasing our profitability.

2. Helpful in Financial Forecasting and Planning

Every year we calculate lots of accounting ratios. When we make trend of all these ratios, we can get useful information for our future forecasting and planning. For example, we can tell five year collection period with following way 2007 = 90 days, 2008 = 70 days, 2009 = 60 days, 2010 = 50 days, 2011 = 30 days. From this trend, we know that we are decreasing the days for collection money from our debtors. With this information, we can make two plans. One is effective use of money which we are getting from our debtors more fastly and second we can also check the behavior of our debtors by comparing this with sales trend. Like this, there are lots of ratios which are also useful for better planning.

3. Helpful in Communication

Ratio analysis is more important from communication point of view. Suppose, we have to appoint new sales agents for our company. At that time, we can communicate them by using our company's sales and profit related ratios. There is no need of hi-tech for understanding the meaning of any specific ratio. For example, our gross profit in 2010 is 26.6% and in 2011, it is 28.55%. By just telling this ratio, we can understand whether our company is growing or falling.

4. Helpful in Co-ordination

No company has all the strength points. Company's financial results shows some strength points and some weak points. Ratio analysis can create co-ordination between strength points and weak points.

5. Helps in Control

Ratio analysis can also use for controlling our business. We can easily create the standard of each financial item of our balance sheet and profit and loss account. On this basis, we can also calculate standard ratios. By comparing standard ratios with actual accounting ratios, we can find variance. These variance may be favorable and unfavorable. On this basis, we can control our business from financial point of view.

6. Helpful for Shareholder's Decisions

For example, I am a shareholder. I want to invest in any company's shares Before buying any company's shares, I will be interested to know company's long term solvency. So, I have to calculate long term solvency ratios. In which, I have to calculate fixed assets to net worth ratio, fixed assets to long term debt ratio. On this basis, I can know the level of fixed assets and its main resource. After checking my money's security, I will be interested to know my return on this investment. ROI, EPS and DPS are most useful ratios which I can calculate for knowing this.

7. Helpful for Creditor's Decisions

Creditors are those persons who provide goods on credit to company or provides short period loan to company. All the creditors are interested to know whether company will repay their debt or not. For this, they calculate current ratio and quick liquid ratio and average payment period. On this basis, they take decisions.

8. Helpful for Employees' Decisions

Every employee wants to increase his salary. He also wants to get more and more incentives from company. For this, he takes help from company's profitability ratios. Profitability ratios will be helpful for employees to pressure on the company for increasing their salary.

9. Helpful for Government Decisions

Different companies analyze their accounting ratios and publish on the net and print newspapers. Govt. collects all these information. On this basis, Govt. makes policies. If ratios will wrong, Govt. policies will become wrong. For example, Govt. collects income data of all companies in different industries for calculation the national income.

LIMITATIONS OF FINANCIAL RATIOS

There are some important limitations of financial ratios that analysts should be conscious of:

- Many large firms operate different divisions in different industries. For these companies it is difficult to find a meaningful set of industry-average ratios.
- Inflation may have badly distorted a company's balance sheet. In this case, profits will also be affected. Thus a ratio analysis of one company over time or a comparative analysis of companies of different ages must be interpreted with judgment.
- Seasonal factors can also distort ratio analysis. Understanding seasonal factors that affect a business can reduce the chance of misinterpretation. For example, a retailer's inventory may be high in the summer in preparation for the back-to-school season. As a result, the company's accounts payable will be high and its ROA low.
- Different accounting practices can distort comparisons even within the same company (leasing versus buying equipment, LIFO versus FIFO, etc.).
- It is difficult to generalize about whether a ratio is good or not. A high cash ratio in a historically classified growth company may be interpreted as a good sign, but could also be seen as a sign that the company is no longer a growth company and should command lower valuations.

- A company may have some good and some bad ratios, making it difficult to tell if it's a good or weak company.

In general, ratio analysis conducted in a mechanical, unthinking manner is dangerous. On the other hand, if used intelligently, ratio analysis can provide insightful information.

PROBLEMS

Illustration 1: From the following Profit and Loss Accounts and the Balance Sheets of Murugan Ltd. for the year ended 31st December, 2004 and 2005, you are required to prepare a comparative income statement and a comparative balance sheet.

PROFIT AND LOSS ACCOUNT

(Rs. in '000)

Particulars	**2004**	**2005**	**Particulars**	**2004**	**2005**
To Cost of goods sold	6,000	7,500	By Net Sales	8,000	10,000
To Operating expenses:					
Administrative expenses	200	200			
Selling expenses	300	400			
To Net profit	1,500	1,900			
	8,000	10,000		8,000	10,000

BALANCE SHEET AS ON 31ST DECEMBER

(Rs. in '000)

Liabilities	**2004**	**2005**	**Assets**	**2004**	**2005**
Bills payable	500	750	Cash	1,000	1,400
Sundry creditors	1,500	2,000	Debtors	2,000	3,000
Tax payable	1,000	1,500	Stock	2,000	3,000
6% Debentures	1,000	1,500	Land	1,000	1,000
6% Preference capital	3,000	3,000	Building	3,000	2,700
Equity capital	4,000	4,000	Plant	3,000	2,700
Reserves	2,000	2,450	Furniture	1,000	1,400
	13,000	**15,200**		**13,000**	**15,200**

Solution

MURUGAN LIMITED
COMPARATIVE INCOME STATEMENT
For the Years ended 31st December, 2004 and 2005

(Rs. in '000)

Particulars	2004	2005	Absolute increase or decrease in 2005	% increase or decrease in 2005
Net Sales	8,000	10,000	+2,000	+25
Cost of goods sold	6,000	7,500	+1,500	+25
Gross profit	2,000	2,500	+ 500	+25
Operating Expenses:				
Administrative exp.	200	200		
Selling expenses	300	400	+ 100	+33.33
Total Operating			+ 100	+20
Expenses	500	600		
Operating profit	1,500	1,900	+ 400	+26.67

MURUGAN LIMITED
COMPARATIVE BALANCE SHEET
As on 31st December, 2004 and 2005

ASSETS	2004	2005	Absolute increase or decrease in 2005	% increase or decrease in 2005
Current Assets				
Cash	1,000	1,400	400	+40
Debtors	2,000	3,000	1,000	+50
Stock	2,000	3,000	1,000	+50
Total Current				
Assets	5,000	7,400	2,400	+48
Fixed Assets				
Land	1,000	1,000		
Building	3,000	2,700	- 300	-10%
Plant	3,000	2,700	- 300	-10%

ASSETS	**2004**	**2005**	**Absolute increase or decrease in 2005**	**% increase or decrease in 2005**
Furniture	1,000	1,400	+400	+40%
Total Fixed				
Assets	8,000	7,800	- 200	- 2.5
Total Assets	13,000	15,200	2,200	+17%
Liabilities & Capital				
Current Liabilities				
Bills Payable	500	750	+250	+50%
Sundry Creditors	1,500	2,000	+500	+33.33%
Taxes Payable	1,000	1,500	+500	+50%
Total Current				
Liabilities	3,000	4,250	+1,250	+41.66%
Long Term Liabilities				
6% Debentures	1,000	1,500	+500	+50%
Total Liabilities	4,000	5,750	+1,750	+43.75%
Capital & Reserves				
6% Pref. Capital	3,000	3,000	***	***
Equity Capital	4,000	4,000	***	***
Reserves	2,000	2,450	450	22.5
Total Shareholders Funds	9,000	9,450	450	5%
Total				
Liabilities &				
Capital	13,000	15,200	2,200	17%

Illustration: 2 The Income Statement of Nikhil Ltd. are given for the years 1998 and 1999. Rearrange the figures in a comparative form and study the profitability position of the firm

Items	**1998 (Rs.)**	**1999 (Rs.)**
Net Sales	15,00,000	20,00,000
Less Cost of Goods Sold	12,00,000	15,00,000
Gross Profit	3,00,000	5,00,000
Less Operating Expenses		

(Administration, Selling Distribution Expenses)	75,000	1,00,000
Operating Profit	2,25,000	4,00,000
Add Other Incomes	25,000	40,000
Earnings before Interest & Tax	2,50,000	4,40,000
Less Interest	40,000	40,000
Earnings before Tax	2,10,000	4,00,000
Less Tax Payable	84,000	1,60,000
Profit after Tax	1,26,000	2,40,000

Solution

Items	**31.12.98 Rs.**	**31.12.99 Rs.**	**Increase / (Decrease) (Rs.)**	**Percentage Increase / (Decrease)**
Net Sales	15,00,000	20,00,000	5,00,000	33.3
Less Cost of Goods Sold	12,00,000	15,00,000	3,00,000	25.0
Gross Profit	3,00,000	5,00,000	2,00,000	66.7
Less Operating Expenses				
(Administration Selling &				
Distribution Expenses)	75,0000	1,00,000	25,000	33.3
Operating Profit	2,25,000	4,00,000	1,75,000	77.8
Add Other Incomes	25,000	40,000	15,000	60.0
Earning before Interest & Tax	25,00	4,40,000	1,90,000	76.0
Less Interest	40,000	40,000	-	-
Earning before tax	2,10,000	4,00,000	1,90,000	90.5
Less Tax	84,000	1,60,000	76,000	90.5
Earnings after Tax	1,26,000	2,40,000	1,14,000	90.5

Illustration 3 : From the following Balance Sheets of Pal Ltd. as on 31st December, 1998 and 1999, prepare a comparative Balance Sheet for the concern

Balance Sheet of Pal Ltd. as on

Liabilities	**1998 (Rs.)**	**1999 (Rs.)**	**Assets**	**1998 (Rs.)**	**1999 (Rs.)**
Equity share capital	3,00,000	4,00,000	Land & Building	2,00,000	1,50,000
Reserves & surpluses	1,60,000	1,10,000	Plant & Machinery	2,00,000	3,00,000
Debentures	1,00,000	1,50,000	Furniture	25,000	30,000
Mortgage loan	80,000	1,00,000	Bills receivables	75,000	45,000
Bills Payable	30,000	25,000	S. Debtors	1,00,000	1,25,000
S. Creditors	50,000	60,000	Stock	1,13,000	1,72,000

Other current Liabilities	5,000	10,000	Prepaid Expenses	2,000	3,000
			Cash & Bank Balance	10,000	30,000
	7,25,000	**8,55,000**		**7,25,000**	**8,55,000**

Comparative Balance Sheet of Pal Ltd.

Item	Year Ending		Increase	Increase/
	31.12.98	31.12.99	(Decrease)	(Decrease)
	(Rs.)	(Rs.)	(Rs.)	(Percentage)
Fixed Assets				
Land & Building	2,00,000	1,50,000	-50,000	-25.0
Plant & Machinery	2,00,000	3,00,000	1,00,000	50.0
Furniture	25,000	30,000	5,000	20.0
Total Fixed Assets	4,25,000	4,80,000	55,000	12.9
Current Assets				
Bills receivable	75,000	45,000	-30,000	-40.0
S. Debtors	1,00,000	1,25,000	25,000	25.0
Stock	1,13,000	1,72,000	59,000	52.2
Prepaid Expenses	2,000	3,000	1,000	50.0
Cash & Bank Balance	10,000	30,000	20,000	200.0
Total Current Assets	3,00,000	3,753000	75,000	25.0
Total Assets	7,25,000	8,55,000	1,30,000	17.9
Shareholders' Funds				
Equity Share Capital	3,00,000	4,00,000	1,00,000	33.3
Reserves & Surpluses	1,60,000	1,10,000	-50,000	-31.3
Total Shareholders Funds	4,60,000	5,10,000	50,000	10.9
Long- Term Loans				
Debentures	1,00,000	1,50,000	50,000	50.0
Mortgage Loan	80,000	1,00,000	20,000	25.0
Total Long- Term Loans	1,80,000	2,50,000	70,000	38.9
Current Liabilities				
Bills Payable	30,000	25,000	-5,000	-16.7
S. Creditors	50,000	60,000	10,000	20.0
Other Current Liabilities	5,000	10,000	5,000	100.0
Total Current Liabilities	85,000	95,000	10,000	11.8
Total Liabilities	7,25,000	8,55,000	1,30,000	17.9

Illustration 4: From the following Profit and Loss Account of Ram Ltd. for the year ending 31st December 1998, and 1999 prepare common size Income Statement and give your interpretation.

Profit & Loss Ale of Ram Ltd. for the year ending 31st December

Particulars	1998 (Rs.)	1999 (Rs.)
Net Sales	22,30,000	31,85,000
Less Cost of Goods sold	15,35,000	22,70,000
Gross Margin	6,95,000	9,15,000
Less Operating Expenses	4,02,000	6,02,000
Income before interest & tax	2,93,000	3,13,000
Less Interest	18,000	30,000
Net Income before Tax	2,75,000	2,83,000
Less Tax @ 50%	1,37,500	1,41,500
Net Income After Tax	1,37,500	1,41,500

Common Size Income Statement of Ram Ltd. for the year ending 31st December

Item	1998		1999	
	Rs.	%age	Rs.	%age
Net Sales	22,30,000	100.00	31,85,000	100.0
Less cost of goods sold	15,35,000	68.80	22,70,000	71.3
Gross Margin	6,95,000	31.20	9,15,000	28. 7
Less operating expenses	4,02,000	18.00	6,02,000	18.9
Income Before interest & tax	2,93,000	13.20	3,13,000	9.8
Less interest	18,000	0.80	30,000	0.9
Net Income before Tax	2,75,000	12.30	2,83,000	8.9
Less Tax	1,37,500	6.15	1,41,500	4.45
Net income tax	1,37,500	6.15	1,41,500	4.45

The absolute figures reveal that sales, cost of goods sold and gross margin all have increased over the last year. But the common size statement reveals that cost of goods sold has increased hi 1999 in relation to sales. Consequently gross profit margin has declined during the current year. Similarly, net income after tax, in terms of absolute figures, shows an increase on the previous year, but the rate of net profit on sales in 1999 in 4.45 as against 6.15 in 1998. Thus, the overall profitability has decreased in 1999 due to rise in cost of sales.

Illustration 5: The following are the Balance Sheets of X Ltd. and Y Ltd. for the year ending 31st December, 2000

Balance Sheet of X Ltd. and Y Ltd. for the year ending 31st Dec. 2000

Liabilities	X Ltd.	Y Ltd.	Assets	X Ltd.	Y Ltd.
Equity Share Capital	3,00,000	6,00,000	Land & Building	60,000	3,40,000
Pref. Share capital	2,00,000	3,20,000	Plant & Machinery	6,60,000	10,00,000
Reserve & Surpluses	68,000	1,36,000	Investment	10,000	80,000
Long-term loans	2,30,000	3,50,000	S. Debtors	20,000	50,000
Bills Payable	4,000	10,000	Stock	16,000	60,000
S. Creditors	24,000	38,000	Prepaid Expenses	2,000	4,000
Expenses Outstanding	30,000	42,000	Cash in Hand	8,000	22,000
Proposed Dividend	20,000	60,000			
	876,000	**15,56,000**		**8,76,000**	**5,56,000**

Compare the financial position of two companies with the help of common size Balance Sheet.

Common Size Balance Sheet as on 31st December, 2000

Item	X Ltd.		Y Ltd.	
	Rs.	**%age**	**Rs.**	**%age**
Shareholder Funds				
Equity Share Capital	3,00,000	34.2	6,00,000	38.6
Preference Share Capital	2,00,000	22.8	3,20,000	20.6
Reserve & Surplus	68,000	7.8	1,36,000	8.7
Total	5,68,000	64.8	10,56,000	67.9
Long Term Loans	2,30,000	26.3	3,50,00	22.5
Total	2,30,000	26.3	3,50,000	22.5
Current Liabilities				
Bills payable	4,000	0.5	10,000	0.6
S. Creditors	24,000	2.7	38,000	2.4
Expenses outstanding	30,000	3.4	42,000	2.7
Proposed dividend	20,000	2.3	60,000	3.9
Total	78,000	8.9	1,50,000	9.6
Grand Total	8,76,000	100.0	15,56,000	100.0
Fixed Assets				
Land & Building	1,60,000	18.3	3,40,000	21.8

Plant & Machinery	6,60,000	75.3	10,00,000	64.3
Total	8,20,000	93.6	13,40,000	86.1
Investments	10,000	1.2	80,000	5.1
Total	10,000	1.2	80,000	5.1
Current Assets				
S. Debtors	20,000	2.3	50,000	3.2
Stock	16,000	1.8	60,000	3.9
Prepaid expenses	2,000	0.2	4,000	0.3
Cash in hand	8,000	0.9	22,000	1.4
Total	46,000	5.2	1,36,000	8.8
Grand Total	8,76,000	100.0	15,56,000	100.0

The statements show that both the companies depend more on shareholders funds for meeting their long-term requirements as the proportion of shareholders funds stands at 64.8% for X Ltd. and 67.9% for Y Ltd. However the long-term funds are not sufficient to finance the requirements of fixed assets in case of X Ltd. X Ltd.'s long-term funds stand at 91.1% (64.8+26.3) against fixed asset at 93.3% of the total of the Balance Sheet. Both the companies suffer from inadequacy of working capital since the proportion of current liabilities is more than the proportion of current assets. However, X Ltd.'s positions much worse then Y Ltd. in this regard.

Illustration 6: From the following data relating to the assets side of the Balance Sheet of Kamdhenu Ltd., for the period 31st Dec., 1995 to 31st December, 1998, you are required to calculate the trend percentage taking 1995 as the base year. (Rupees in thousands)

Assets	**1995**	**1996**	**1997**	**1998**
Cash	100	120	80	140
Debtors	200	250	325	400
Stock-in-trade	300	400	350	500
Other Current Assets	50	75	125	150
Land	400	500	500	500
Building	800	1,000	1,200	1,500
Plant	1,000	1,000	1,200	1,500
	2,850	3,345	3,780	4,690

Solution

Assets	December 31 (Rs. in thousands)				Trend Percentage Base year 1995			
	1995	**1996**	**1997**	**1998**	**1995**	**1996**	**1997**	**1998**
Current Assets:								
Cash	100	120	80	140	100	120	80	140
Debtors	200	250	325	400	100	125	163	200
Stock-in-trade	300	400	350	500	100	133	117	167
Other Current	50	75	125	150	100	150	250	300
Assets								
Total Current Assets	650	845	880	1,190	100	129	135	183
Assets								
Fixed Assets								
Land	400	500	500	500	100	125	125	125
Building	800	1,000	1,200	1,500	100	125	150	175
Plant	1,000	1,000	1,200	1,500	100	100	120	150
Total Fixed Assets	2,200	2,500	2,900	3,500	100	114	132	159

PROBLEMS ON RATIO ANALYSIS

Illustration 1:

The following are the financial statements of Yesye Limited for the year 2005.

TRADING AND PROFIT AND LOSS ACCOUNT
for the year ended 31-12-2005

Particulars	Rs.	Particulars	Rs.
To Cost of goods sold	1,80,000	By Sales	3,00,000
To Gross profit c/d	1,20,000		
	3,00,000		**3,00,000**
To expenses	1,00,000	By Gross profit b/d	1,20,000
To Net Profit	20,000		
	1,20,000		**1,20,000**

BALANCE SHEET AS AT 31-12-2005

Liability	Rs.	Assets	Rs.
Equity Share capital	1,00,000	Fixed Assets	1,50,000
General Reserve	90,000	Stock	42,500
Profit & Loss Balance	7,500	Debtors	19,000
Sundry Creditors	35,000	Cash	61,000
6% Debentures	30,000		
Proposed Dividends	10,000		
	2,72,500		**2,72,500**

You are required to compute the following:

1. Current ratio
2. Acid Test ratio
3. Gross Profit ratio
4. Debtors' Turnover ratio
5. Fixed Assets to net tangible worth
6. Turnover to fixed assets

Solution

1) Current Ratio = $\dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

= $\dfrac{1,22,500}{45,000}$

= **2.7:1**.

2) Acid Test Ratio = $\dfrac{\text{Quick Assets}}{\text{Quick Liabilities}}$

= $\dfrac{80,000}{45,000}$

= **1.8:1.**

3) Gross Profit Ratio = $\dfrac{\text{Gross Profit}}{\text{Sales}} \times 100$

1,20,000

= --------------- x 100
3,00,000
= 40%

4) Debtors' Turnover Ratio = Net Sales / Average Debtors

= 3,00,000 / 19,000

= 15.78 times.

Collection Period = No. of days in the year / Debtors' Turnover

= 365 / 15.78

= **23 days**

5) Fixed Asset to Net Tangible Worth = Fixed Assets / Proprietor's Fund X 100

= 1,50,000 / 1,97,500 x 100

= **76%**

6) Turnover to Fixed Assets = Net Sales / Fixed Assets

= 3,00,000 / 1,50,000

= **2 times**

Illustration 2:

a) Working capital	Rs.45,000
b) Current ratio	2.5
c) Liquidity ratio	1.5
d) Proprietary ratio – (Fixed assets to proprietary funds)	0.75
e) Overdraft	Rs.10,000
f) Retained earnings	Rs.30,000

There are no long term loans and fictitious assets.

Find out:

1. Current assets
2. Current liabilities
3. Fixed assets
4. Quick assets
5. Quick liabilities
6. Stock Equity

Solution

Current Assets

Current assets	2.5
Current liability	1.0
Working capital	1.5

If working capital is 1.5, current asset will be 2.5.

If working capital is Rs.45,000, current assets will be Rs.75,000

Current Assets = Rs.75,000

Current Liability

Current Liability = Current assets – Working capital

= Rs.75,000 – Rs.45,000

= Rs.30,000

Fixed Assets

Shareholders' Fund+ Current Liabilities = Fixed Assets + Current Assets

Shareholders' Fund=Fixed assets + Current assets – Current Liabilities

= Fixed assets + Rs.75,000 – Rs.30,000

= Fixed assets + Rs.45,000

Let the shareholders' fund be x, fixed assets will be ¾ x

x = Rs. ¾ x + Rs.45,000

¼ x = Rs.45,000

x = Rs.1,80,000

¾ x = Rs.1,35,000

Fixed assets = Rs.1,35,000

∴Shareholders Funds = Rs.1,35,000 + Rs.45,000

= Rs.1,80,000

Stock

$$\text{Liquid ratio} = \frac{\text{Quick assets}}{\text{Quick liabilities}}$$

Quick assets = Current assets – Stock

Quick liabilities = Current liabilities – Bank overdraft

Let the value of stock be x.

$$\frac{\text{Quick assets}}{\text{Quick liabilities}} = \frac{\text{Rs.75,000} - x}{30{,}000 - 10{,}000}$$

$$= \frac{75{,}000 - x}{20{,}000} = 1.5$$

Cross multiplying

75,000 – x = 20,000 x 1.5

75,000 – x = 30,000

x = 45,000

Stock = Rs.45,000

Quick Assets = Rs.75,000 – Rs.45,000

= Rs.30,000

Quick Liabilities = Rs.20,000

Equity

Shareholders' Fund = Equity + Retained earnings

Shareholders' Fund = Rs.1,80,000 (as calculated)

Retained earnings = Rs.30,000 (as given)

Equity = Rs.1,50,000

Illustration 3: From the following balance sheet of Dinesh Limited calculate (i) Current ratio (ii) Liquid ratio (iii) Debt-equity ratio (iv) Proprietary ratio, and (v) Capital gearing ratio.

Balance Sheet of Dinesh Limited as on 31-12-2005

Liabilities	Rs.	Assets	Rs.
Equity share capital	10,00,000	Goodwill	5,00,000
6% preference capital	5,00,000	Plant & Machinery	6,00,000
Reserves	1,00,000	Land & Buildings	7,00,000
Profit & Loss a/c	4,00,000	Furniture	1,00,000
Tax provision	1,76,000	Stock	6,00,000
Bills payable	1,24,000	Bills receivables	30,000
Bank overdraft	20,000	Sundry debtors	1,50,000
Sundry creditors	80,000	Bank account	2,00,000
12% debentures	5,00,000	Short term investment	20,000
	29,00,000		**29,00,000**

Solution

(i) Current ratio = $\dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

= $\dfrac{\text{Stock + Bills receivables + Debtors + Bank + S.T. Investments}}{\text{S. Creditors + Bills Payable + Bank O.D. + Tax Provision}}$

= $\dfrac{10,00,000}{4,00,000}$ = 2.5 : 1.

Interpretation: The current ratio in the said firm is 2.5:1 against a standard ratio of 2:1. It is a good sign of liquidity. However, the stock is found occupying 60 percent of current assets which may not be easily realisable.

(ii) Liquid ratio = $\dfrac{\text{Current Assets – Stocks}}{\text{Current Liabilities}}$

= $\dfrac{\text{Liquid Assets}}{\text{Current Liabilities}}$

4,00,000
= -------------

4,00,000
= 1:1.

Interpretation: The standard for quick ratio is 1:1. The calculated ratio in case of Dinesh Limited is also 1:1. The above two ratios show the safety in respect of liquidity in the said firm.

$$\text{(iii) Debt Equity ratio} = \frac{\text{Long term Debt}}{\text{Equity Shareholders' Fund}}$$

$$= \frac{\text{Debentures}}{\text{Equity capital + Preference capital + Reserves + Profit \& Loss a/c}}$$

$$= \frac{5,00,000}{10,00,000 + 5,00,000 + 1,00,000 + 4,00,000}$$

$$= 1:4.$$

Interpretation: Debt-equity ratio indicates the firm's long term solvency. It can be observed that the firm's long term loans are constituting 25 percent to that of the owners' fund. Although such a low ratio indicates better long term solvency, the less use of debt in capital structure may not enable the firm to gain from the full stream of leverage effects.

$$\text{(iv) Proprietary ratio} = \frac{\text{Proprietors' Funds}}{\text{Total assets}}$$

$$\frac{20,00,000}{29,00,000} = \quad = \quad 20:29$$

Interpretation: Out of total assets, seven-tenths are found financed by owners' funds. In other words a large majority of long term funds are well invested in various long term assets in the firm.

(v) Capital gearing ratio = Owners' resources

Fixed-interest bearing resources

$$= \frac{\text{Equity Share Capital + Reserves + P\&L A/c}}{\text{Preference Capital + Debentures}}$$

$$= \frac{10,00,000 + 1,00,000 + 4,00,000}{5,00,000 + 5,00,000}$$

$$= \frac{15,00,000}{10,00,000} = 1.5:1.$$

Interpretation: Keeping Rs.15 lakhs of equity funds as security, the firm is found to have mobilised Rs.10 lakhs from fixed interest bearing sources. It indicates that the capital structure is low geared.

Illustration 4: The following are the balance sheet and profit and loss account of Sundara Products Limited as on 31st December 2005.

Profit and Loss Account

Particulars	Rs.	Particulars	Rs.
To opening stock	1,00,000	By Sales	8,50,000
Purchases	5,50,000	Closing stock	1,50,000
Direct expenses	15,000		
Gross profit	3,35,000		
	10,00,000		**10,00,000**
To Admn. expenses	50,000	By Gross profit	3,35,000
Office establishment	1,50,000	Non-operating income	15,000
Financial expenses	50,000		
Non-Operating			
Expenses/losses	50,000		
Net profit	50,000		
	3,50,000		**3,50,000**

Balance Sheet

Liabilities	Rs.	Assets	Rs.

Equity share capital		Land & Buildings	1,50,000
(2000 @ 100)	2,00,000	Plant & Machinery	1,00,000
Reserves	1,50,000	Stock in trade	1,50,000
Current Liabilities	1,50,000	Sundry Debtors	1,00,000
P&L a/c Balance	50,000	Cash & Bank	50,000
	5,50,000		**5,50,000**

Calculate turnover ratios.

Solution

(i) Share capital to turnover ratio

$$= \frac{\text{Sales}}{\text{Total Capital Employed}}$$

$$= \frac{\text{Sales}}{\text{Equity + Reserve + P \& L a/c Balance}}$$

$$= \frac{8,50,000}{4,00,000}$$

= 2.13 times.

Interpretation: This turnover ratio indicates that the firm has actually converted its share capital into sales for about 2.13 times. This ratio indicates the efficiency in use of capital resources and a high turnover ratio ensures good profitability on operations on an enterprise.

(ii) Fixed Asset's Turnover Ratio

$$= \frac{\text{Sales}}{\text{Total Fixed Assets}}$$

$$= \frac{\text{Sales}}{\text{Land + Plant \& Machinery}}$$

$$= \frac{8,50,000}{2,50,000}$$

= 3.4 times.

Interpretation: Although fixed assets are not directly involved in the process of generating sales, these are said to back up the production process. A ratio of 3.4 times indicates the efficient utilisation of various fixed assets in this organisation.

(iii) Net Working Capital Turnover:

$$= \frac{\text{Sales}}{\text{Net Working Capital}}$$

$$= \frac{\text{Sales}}{\text{Current Assets} - \text{Current Liabilities}}$$

$$= \frac{8{,}50{,}000}{3{,}00{,}000 - 1{,}50{,}000}$$

= 5.67 times.

Interpretation: Net working capital indicates the excess of current assets financed by permanent sources of capital. An efficient utilisation of such funds is of prime importance to ensure sufficient profitability along with greater liquidity. A turnover ratio of 5.7 times is really appreciable.

(iv) **Average Collection Period:**

$$\text{Debtor's turnover} = \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

Assuming that 80% of the sales of 8,50,000 as credit sales:

$$= \frac{6{,}80{,}000}{1{,}00{,}000}$$

= 6.8 times

Average collection period

$$= \frac{\text{360 days}}{}$$

Debtors' Turnover

$$= \frac{360}{6.8}$$

= 53 days

Interpretation: Average collection period indicates the time taken by a firm in collecting its debts. The calculated ratio shows that the realisation of cash on credit sales is taking an average period of 53 days. A period of roughly two months indicate that the credit policy is liberal and needs a correction.

(v) **Stock Turnover Ratio**

$$= \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

$$= \frac{\text{Sales – Gross Profit}}{\text{(Opening stock + Closing stock) + 2}}$$

$$= \frac{5{,}15{,}000}{1{,}25{,}000}$$

= 4.12 times.

Interpretation: Stock velocity indicates the firm's efficiency and profitability. The stock turnover ratio shows that on an average inventory balances are cleared once in 3 months. Since there is no standard for this ratio, the period of operating cycle of this firm is to be compared with the industry average for better interpretation.

* * * * *

POSSIBLE QUESTIONS
PART A (1 mark)
(Online examinations)

PART B (2 Marks)

1. Current Ratio 2.5; Working Capital Rs. 63,000. Calculate Current Assets and Current Liabilities.

2. What do you understand by Ratio Analysis?

3. Calculate Gross Profit Ratio:

Sales	Rs. 2,20,000	Purchases	Rs. 1,75,000
Sales Returns	Rs. 20,000	Purchase Returns	Rs. 15,000
Opening Stock	Rs. 30,000	Closing Stock	Rs. 40,000

4. Calculate Operating Profit Ratio :

Sales	Rs. 2,00,000	Administration Expenses	Rs. 20,000
Gross Profit	Rs. 70,000	Income form Investments	Rs. 22,000
Selling Expenses	Rs. 10,000	Loss due to fire	Rs. 12,000

5. What is meant by Interpretation of Financial Statements?

SECTION – C (6 Marks)

1. The Income Statements of a concern are given for the year ending 31st December, 2016 and 2017.

Prepare a Comparative Income Statement

PARTICULARS	**2016 Rs. (000)**	**2017 Rs. (000)**
Net Sales	785	900
Cost of Goods Sold	450	500
Operating Expenses		
General and administrative expenses	70	72
Selling Expenses	80	90
Non – Operating Expenses :		
Interest paid	25	30
Income Tax	70	80

2. The following is the Balance Sheet of New India Ltd., for the year ending Dec. 31, 2017

Liabilities	**Rs.**	**Assets**	**Rs.**
Equity Share Capital	10,00,000	Goodwill	1,00,000
9 % Preference Share Capital	5,00,000	Land and Building	6,50,000
8 % Debentures	2,00,000	Plant	8,00,000
Long – term Loan	1,00,000	Furniture and Fixtures	1,50,000
Bills Payable	60,000	Bills Receivables	70,000
Sundry Creditors	70,000	Sundry Debtors	90,000
Bank Overdraft	30,000	Bank Balance	45,000
Outstanding Expenses	5,000	Short – term Investments	25,000
		Prepaid Expenses	5,000
		Stock	30,000
	19,65,000		**19,65,000**

From the balance sheet calculate :
(a) Current Ratio
(b) Acid Test Ratio
(c) Absolute Liquid Ratio

3. The following are Balance Sheets of a concern for the years 2016 and 2017. Prepare a Comparative Balance Sheet

BALANCE SHEET

AS ON 31st DECEMBER

Liabilities	2016 (Rs.)	2017 (Rs.)	Assets	2016 (Rs.)	2017 (Rs.)
Equity Share Capital	6,00,000	8,00,000	Land and Buildings	3,70,000	2,70,000
Reserves and Surplus	3,30,000	2,22,000	Plant and Machinery	4,00,000	6,00,000
Debentures	2,00,000	3,00,000	Furniture and Fixtures	20,000	25,000
Long – term loans on Mortgage	1,50,000	2,00,000	Other Fixed Assets	25,000	30,000
Bills Payable	50,000	45,000	Cash in hand and at Bank	20,000	80,000
Sundry Creditors	1,00,000	1,20,000	Bills Receivables	1,50,000	90,000
Other Current Liabilities	5,000	10,000	Sundry Debtors	2,00,000	2,50,000
			Stock	2,50,000	3,50,000
			Prepaid Expenses	-	2,000
Total	**14,35,000**	**16,97,000**	Total	**14,35,000**	**16,97,000**

(OR)

4. From the following balance sheet of A ltd prepare comparative and common size balance sheet.

Balance Sheet

Liabilities	2006	2007	Assets	2006	2007
Share Capital	16000	17000	Land	10000	10000
Profit & Loss Appn. A/c.	2900	4900	Plant	4800	6800
Creditors	1800	1000	Debtors	3300	3900
Mortgage Loan	-	1000	Stock	1800	1400
			Cash at Bank	800	1800
	20700	**23900**		**20700**	**23900**

5. You are given the following information,

Particulars	Rs.
Cash	18,000
Debtors	1,42,000
Closing stock	1,80,000
Bills payable	27,000
Creditors	50,000
Outstanding expenses	15,000
Tax payable	75,000

Calculate (a) Current ratio (b) Liquidity ratio (c) Absolute liquidity ratio.

6. From the following information, prepare a balance sheet show the workings.

1. Working capital	Rs.75,000
2. Reserve and surplus	Rs.1,00,000
3. Bank overdraft	Rs.60,000
4. Current ratio	1.75
5. Liquid ratio	1.15
6. Fixed assets to proprietors funds	0.75
7. Long term liabilities	Nil

7. The following figures are related to the trading activities of a company for the year ended 31-12-1990.

Particular	Rs.	Particular	Rs.
Sales	1,00,000	Salary of sales man	1,800
Sales returns	4,000	Advertising	700
Closing stock	14,000	Travelling expenses	500
Purchases	70,000	Salaries to office staffs	3,000
Dividend received	1,200	Rent	6,000
Opening stock	11,000	Stationery	200
Profit on sale of fixed assets	600	Depreciation	1,000
Loss on sale of shares	300	Other expenses	2,000
		Provision for Tax	7,000

You are required to calculate

(i) Gross profit Ratio
(ii) Operating Profit Ratio
(iii) Operating Ratio
(iv) Net Profit Ratio

* * * * *

Karpagam Academy of Higher Education
(Deemed University Established Under Section 3 of UGC Act, 1956)
Coimbatore - 641 021.
Management Accounting (16CCU502A)

UNIT II

S.NO	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
1	The indicated quotient of two mathematical expression is known as---------------	Ratio	Analysis	Working capital	Statements	Ratio
2	Current ratio is an example for _____ ratio.	Balance sheet	Income statement	Inter statement	Intra Statement	Balance sheet
3	___ ratio is an example for long term solvency ratio.	**Gross profit**	Dealt equity	Net profit	Price earning	Debt Equity
4	The relationship between current assets and current liabilities is known as ___ ratio.	Gross profit	Net profit	current	Stock turnover	current
5	The ideal current ratio is _______	2:1	3:1	4:1	3:2	2:1
6	Liquid ratio is also known as ___ ratio.	current	Acid test	Velocity	Quick	Acid test
7	Operating cost net sales X 100= _______	Gross profit ratio	Net profit ratio	Operating ratio	Current ratio	Operating ratio
8	The ideal liquid ratio is _______	1:1	1:2	1:4	1:5	1:1
9	Total sales / debtors = _____	Debtors	Debtors turnover ratio	Current ratio	Liquid ratio	Debtors turnover ratio

10	The excess of current assets over current liabilities is known as	Current ratio	Liquid ratio	Working capital	Debt-Equity Ratio	Working capital
11	To measure the overall performance and 3effectiven3ess of the firm.	Profitability	Activity	Liquidity	Leverage	Profitability
12	A ___ current ratio represents that the firms liquidity position.	High	Low	Both a and b	Medium	Low
13	Efficiency ratio are also called as ____ ratios	Turnover	Profitability	Liquidity	Leverage	Turnover
14	A ____ inventory ration indicates an inefficient management of inventory.	Low	High	Both a and b	Medium	Low
15	Profit and loss account is also called as the _____ statement.	Balance sheet	Income statement	Asset account	Common Statement	Income statement
16	Proprietary ratio is also known as _______	Equity	Debt equity	current	Dect	Equity
17	With the help of current assets and current liabilities, one can calculate.	Current ratio	Gross profit ratio	Net profit ratio	Operating ratio	Current ratio
18	Current ration 2.5 ; current liabilities Rs 1,00,000 current assets=_____	40,000	2,50,000	1,50,000	2,00,000	2,50,000
19	Average of gross profit Rs. 40,000 ; rate of gross profit 25% sales=____	10,000	1,00,000	1,60,000	50,000	1,00,000
20	Average stock= rs. 40,000; closing stock RS 5000 in excess of opening stock. Then the closing	42,500	80,000	40,000	85,000	42,500
21	The mathematical yardstick, which provides a measure of the relationship between two	Accounting ratio	Property ratio	Current ratio	Gross profit ratio	Accounting ratio
22	____ Ratios help to management in evaluating the performance.	Solvency	Activity	Liquidity	Profitability	Activity
23	____ Solvency is indicated by debt equity ratio.	Long term	Short term	Both a and b	Medium Term	Long term

24	The primary objective of _____ ratio is to measure the liquidity.	Gross profit	Net profit	Current ratio	Operating Profit	Current ratio
25	Average receivable period is 2.4 months, hence debtors turnover will be	6 months	10 months	5 months	4 months	5 months
26	If the operating ratio is 75% ; the net operating profit ratio will be	25%	100%	66%	10%	25%
27	____ ratio establishes the relationship between total operating expenses and sales.	Current ratio	Operating ratio	Liquid ratio	Stock turnover ratio	Operating ratio
28	Total assets minus total liabilities is equal to _______	Network	Owner's fund	Share holder's fund	All of the above	All of the above
29	_____ ratio indicates the number of times earning per share is covered by its market price.	Earning per share	Price earning ratio	Dividend per share	Yield Per Share	Price earning ratio
30	_____ ratio I s also known as rate of dividend to net profit	Payout	Price earning ratio	Gross profit ratio	Net profit ratio	Payout
31	The reciprocal of payout ratio is ________	Interest cover	Dividend covers	Earning per share	Price earning ratio	Dividend covers
32	Activity ratios are also known as	Performance ratios	Turnover ratios	Both a and b	Profitability Ratios	Turnover ratios
33	________ indicates the number of times the payable rotate in a year.	Creditors velocity	Debtors turnover	Stock turnover	Debtors velocity	Creditors velocity
34	_______ ratio attempts to measure the utilization and effectiveness of the use of current assets.	Current assets turn over	Current ratio	Net current assets turnover	Liquid ratio	Current assets turn over
35	Financial ratio include	Fixed assets ratio	Current ratio	Quick ratio	All of the above	All of the above
36	Common statement is also known as	Component percentage	100 percent statement	Both a and b	50 percent statement	Both a and b
37	_______ analysis refers to the comparison financial data of a company for several years.	vertical	Horizontal	Both a and b	axis	Horizontal

38	_______ analysis refers to the study of relationship of the various items in the financial	vertical	Horizontal	Both a and b	axis	vertical
39	______ liabilities are those liabilities which are intended to be paid in the ordinary course of	Fixed	Long term	Short term	current	current
40	Current ratio is 2. Current assets = Rs 40,000 then current liabilities= _____	Rs.5,000	Rs10,000	Rs1,20,000	Rs1, 40,000	Rs1,20,000
41	Financial statements are	Estimates of facts	Anticipated facts	Recorded facts	Historical Facts	Recorded facts
42	Current liability of company is Rs. 3,00,000 if current ratio is 3:1 and quick ratio is1:1 then the	1,00,000	2,00,000	3,00,000	6,00,000	6,00,000
43	Current ratio= 2:5; liquid ratio=1:5 working capital= 60,000 then liquid assets = ________	20,000	60,000	40,000	1,00,000	60,000
44	Current assets of a concern = Rs. 3,00,000 current liabilities = 1,00,000 then current ratio =_____	3	2	1	4	3
45	If current ratio is 1:5:1 and current liability is 50,000 then the current assets could be	1,00,000	1,25,000	75,000	70,000	75,000
46	Higher the ratio, the lower the profitability is applicable to	Gross profit ratio	Net profit ratio	Operation ratio	Return on investment	Operation ratio
47	Which of the following transaction with results in change in current ratio	paid 90 day bank loan	liquidated long term liability	purchased merchandise on	received payment of an account	liquidated long term liability
48	Financial statement records only	Monetary facts	No monetary facts	Both a and b	Non Monetary	Monetary facts
49	Network of business means	Equity capital	Total assets	Total assets-total liabilities	Fixed assets-current assets	Total assets-total liabilities
50	An ____ in debt collection period indicates blockage of funds in debtors.	Increase	Decrease	Both a and b	Neither Increase nor Decrease	Increase
51	_____ ratio denotes the relationship between stock and sales.	stock turn over ratio	fixed assets turnover ratio	working capital ratio	gross profit ratio	stock turn over ratio

52	____ ratio gives an idea about adequate investments or over investment or under	fixed assets turn over ratio	fixed assets to current assets	fixed assets to capital ratio	Turnover Ratio	fixed assets to capital ratio
53	______ is the between sales or cost of sales and share holder's fund.	Debt equity ratio	Owned capital turnover	Fixed assets ratio	Operation ratio	Owned capital turnover
54	Total sales – sales return = _______	Net sales	Cash sales	Credit sales	Average sales	Net sales
55	Cash sales + credit sales + ____	Net sales	Sales return	Total sales	Average Sales	Total sales
56	Cost of goods sold + closing stock – opening stock=_______	Purchase	Sales	Purchase return	Sales return	Purchase
57	Opening stock + closing stock/2 =______	Total stock	Average stock	Total liabilities	Total Assets	Average stock
58	Working capital = proprietary funds _____	Total asset	Current asset	Fixed asset	Contingent Assets	Fixed asset
59	Opening stock + purchase – closing stock	Sales	Purchase	Cost of goods sold	Working capital	Cost of goods sold
60	Opening debtors + closing debtors /2 _______	Total creditors	Average creditors	Total debtors	Average debtors	Average debtors

UNIT-III

SYLLABUS

Fund Flow and Cash Flow - Meaning – Definition – Uses and Limitations – Procedures for Preparing Fund Flow Statement. Cash Flow Analysis: Meaning – Objectives – Uses and significance of CFS – Comparison between Funds Flow and Cash Flow Statements –Preparation of Cash Flow Statement as per Accounting Standards.

INTRODUCTION

Every business establishment usually prepares the balance sheet at the end of the fiscal year which highlights the financial position of the yester years It is subject to change in the volume of the business not only illustrates the financial structure but also expresses the value of the applications in the liabilities side and assets side respectively. Normally, Balance sheet reveals the status of the firm only at the end of the year, not at the beginning of the year. It never discloses the changes in between the value position of the firm at two different time periods/dates.

The method of portraying the changes on the volume of financial position is the statement fund flow statement. To put them in nutshell, fund between two different time periods. It is further illustrated that the changes in the financial position or the movement or flow of fund.

MEANING OF FUND FLOW STATEMENT

Fund flow statement is a statement which shows source and use of fund in particular time. This period may be two years or more years' .Basis of making fund flow statement is two years or more than two years balance sheet.

Funds Flow Statement is a statement prepared to analyse the reasons for changes in the Financial Position of a Company between two Balance Sheets. It shows the inflow and outflow of funds i.e. Sources and Applications of funds for a particular period.

A report on the movement of funds or working capital. In a narrow sense the term fund means cash and the fund flow statement depicts the cash receipts and cash disbursements/ payments. It highlights the changes in the cash receipts and payments as a cash flow statement in addition to the cash balances i.e., opening cash balance and closing cash balance. Contrary to the earlier, the fund means working capital i.e., the differences between the current assets and current liabilities.

The term flow denotes the change. Flow of funds means the change in funds or in working capital. The change on the working capital leads to the net changes taken place on the working capital i.e., especially due to either increase or decrease in the working capital. The change in the volume of the working capital due to numerous transactions. Some of the transactions may lead to increase or decrease the volume of working capital. Some other transactions neither registers an increase nor decrease in the volume of working capital.

DEFINITION OF FUND FLOW STATEMENT

According Foulke "A statement of source and application of funds is a technical device designed to analyze the changes to the financial condition of a business enterprise in between two dates"

USES OF FUND FLOW STATEMENT

1. Funds flow statement reveals the net result of Business operations done by the company during the year.
2. In addition to the balance sheet, it serves as an additional reference for many interested parties like analysts, creditors, suppliers, government to look into financial position of the company.
3. The Fund Flow Statement shows how the funds were raised from various sources and also how those funds were deployed by a company, therefore it is a great tool for management when it wants to know about where and from what sources funds were raised and also how those funds got utilized into the business.
4. It reveals the causes for the changes in liabilities and assets between the two balance sheet dates therefore providing a detailed analysis of the balance sheet of the company.

5. Funds flow statement helps the management in deciding its future course of plans and also it acts as a control tool for the management.
6. Funds flow statement should not be looked alone rather it should be used along with balance sheet in order judge the financial position of the company in a better way.

LIMITATIONS OF FUND FLOW STATEMENT

1. Funds Flow statement has to be used along with balance sheet and profit and loss account for inference of financial strengths and weakness of a company it cannot be used alone.
2. Fund Flow Statement does not reveal the cash position of the company, and that is why company has to prepare cash flow statement in addition to funds flow statement.
3. Funds flow statement only rearranges the data which is there in the books of account and therefore it lacks originality. In simple words it presents the data in the financial statements in systematic way and therefore many companies tend to avoid preparing funds flow statements.
4. Funds flow statement is basically historic in nature, that is it indicates what happened in the past and it does not communicate anything about the future, only estimates can be made based on the past data and therefore it cannot be used the management for taking decision related to future.

PROCEDURE FOR PREPARING FUND FLOW STATEMENT

- First and fore most method is to prepare the statement of changes in working capital i.e., to identify the flow of fund / movement of fund through the detection of changes in the volume of working capital.
- Second step is the preparation of Non- Current A/c items-Changes in the volume of Non current a/cs have to be prepared only in order to quantify the flow fund i-e either sources or application of fund.
- Third step is the preparation Adjusted Profit& Loss A/c, which already elaborately discussed in the early part of the chapter.
- Last step is the preparation of fund flow statement.

PREPARATION OF FUNDS FLOW STATEMENT

Two statements are involved in Funds Flow Analysis.

- Statement or Schedule of Changes in Working Capital
- Statement of Funds Flow

Statement of Changes in Working Capital

This statement when prepared shows whether the working capital has increased or decreased during two Balance Sheet dates. But this does not give the reasons for increase or decrease in working capital. This statement is prepared by comparing the current assets and the current liabilities of two periods. It may be shown in the following form:

Schedule of Changes in Working Capital (Proforma)

Items		As on	As on	Change	
				Increase	Decrease
Current Assets					
Cash Balances					
Bank Balances					
Marketable Securities					
Stock in Trade					
Pre-paid Expenses					
Current Liabilities					
Bank Overdraft					
Outstanding Expenses					
Accounts Payable					
Provision for Tax					
Dividend					
Increase / Decrease in					
Working Capital					

Any increase in current assets will result in increase in Working Capital and any decrease in Current Assets will result in decrease in Working Capital. Any increase in current liability will result in decrease in working capital and any decrease in current liability will result in increase in working capital.

Funds Flow Statement

Funds Flow Statement is also called as Statement of Changes in Financial Position or Statement of Sources and Applications of Funds or where got, where gone statement. The purpose of the funds flow statement is to provide information about the enterprise's investing and financing activities. The activities that the funds flow statement describes can be classified into two categories:

- Activities that generate funds, called Sources, and
- Activities that involve spending of funds, called Uses

When the funds generated are more than funds used, we get an increase in working capital and when funds generated are lesser than the funds used, we get decrease in working capital. The increase or decrease in working capital disclosed by the schedule of changes in working capital should tally with the increase or decrease disclosed by the Funds Flow Statement.

The Funds Flow Statement may be prepared either in the form of a statement or in 'T' shape form. When prepared in the form of the statement it would appear as follows:

Funds Flow Statement

Sources of Funds			
Issues of Shares	x	x	x
Issue of Debentures	x	x	x
Long term borrowings	x	x	x
Sale of Fixed Assets	x	x	x
*Operating Profit			
(Funds from Operations)	x	x	x
Total Sources	x	x	x
Application of Funds			
Redemption of Redeemable			
Preference shares	x	x	x
Redemption of Debentures	x	x	x
Payments for other long-term loans	x	x	x
Purchase of fixed assets	x	x	x
* Operation loss (Funds lost from	x	x	x
Operations)			
Total uses	x	x	x

Net increase / decrease in working capital (Total Sources – Total uses)

When prepared in 'T' shape form, the Funds Flow Statement would appear as follows:

Funds Flow Statement

Sources of Funds		**Application of Funds**	
* Funds from operation	x x x	*Funds lost in operations	x x x
Issue of shares	x x x	Redemption of Preference	
		Shares	x x x
Issue of Debentures	x x x	Redemption of Debentures	x x x
Long-term borrowings	x x x	Payment of other long-term	
		Loans	x x x
Sale of fixed assets	x x x	Purchase of fixed assets	x x x
* Decrease in working		Payment of dividend, tax,	
capital	x x x	etc.	x x x
		Increase in working capital	x x x

*Only one figure will be there.

It may be seen from the proforma that in the Funds Flow Statement preparation, current assets and current liabilities are ignored. Attention is given only to change in fixed assets and fixed liabilities.

In this connection an important point about provision for taxation and proposed dividend is worth mentioning. These two may either be treated as current liability or long-term liability. When treated as current liabilities they will be taken to 'schedule of changes in working capital' and thereafter no adjustment is required anywhere. If they are treated as long-term liabilities there is no place for them in the schedule of changes in working capital. The amount of tax provided and dividend proposed during the current year will be added to net profits to find the funds from operations. The amount of actual tax and dividend paid will be shown as application of funds in the Funds Flow Statement. In this lesson, we have taken them as Current Liabilities.

Illustration 1: The mechanism of preparation of Funds Flow Statement is proposed to be explained with the help of Annual Reports for the years 2003-04 and 2004-05 pertaining to Arasu Limited.

ARASU LIMITED

Balance Sheet as at 31st March 2005

		2004-05		2003-04
I. Source of Funds				
1. Share Capital		1,40,00		1,40,00
2. Reserves and Surplus		2,77,84		2,30,62
		4,17,84		3,70,62
II. Application of Funds				
1. Fixed Assets	4,83,15		4,61,23	
Less: Dep. Provision	2,57,85	2,25,30	2,27,36	2,33,87
2. Investments		20,25		20,30
3. **Current Assets, Loans**				
and Advances				
Inventories	1,52,83		1,92,54	
Debtors	51,41		64,29	
Cash and Bank	1,40,80		18,46	
Loans & Advances	17,82		14,73	
	3,62,86		2,90,02	
Less: **Current Liabilities**				
& Provisions				
Liabilities	89,81		76,70	
Provisions		100,76	96,87	
		1,90,57	1,73,57	
Net Current Assets		1,72,29		1,16,45
(Working Capital)		4,17,84		3,70,62

Profit and Loss Account

for the year ended 31st March 2005

	2004-05	**2003-04**
Income		
Sales	4,94,19	5,36,63
Other income	2,35,73	2,57,64
	7,29,92	**7,94,27**
Expenditure		
Opening Stock	20,45	25,59
Raw materials consumed	87,35	95,67
Packing materials consumed	2,87,78	3,29,04
Excise Duty	23,90	27,26
Expenses	1,65,38	1,29,94
Directors' Fees	11	10
Interest	94	5,69
Depreciation	30,49	39,98
	6,16,40	**6,53,27**
Less: Closing Stock	19,06	20,45
	5,97,34	**6,32,82**
Profit before Taxation	1,32,58	1,61,45
Provision for Income-tax	(64,36)	(82,40)
	68,22	**79,05**
Profit brought forward from		
Previous year	12	1
Balance	**68,34**	**79,06**
Provision for Taxation		
Relating to Earlier Year		(46,27)
Miscellaneous Expenditure		
Written off		(15,67)
Balance available for		
Appropriation	**68,34**	**17,12**
Appropriations		
General Reserve	47,25	3,00
Proposed Reserve for Appropriation	21,00	14,00
	68,25	**17,00**
Balance carried over to next year	9	12

For the above financial statements, Funds Flow Statement is prepared as follows with necessary workings:

I. Calculation of Funds from Operations for the year 2004-05

		(Rs.`000)
Balance of Profit carried over to next year		9
Add:	Provision for Depreciation	30,49
	Transfer to General Reserves	47,25
		77,83
Less:	Balance of Profit brought forward from previous year	12
Funds from operations		77,71

Note: Provision for income-tax and proposed dividend are taken as current liabilities. Hence they are not added here. They will be taken to Schedule of Changes in Working Capital.

II. Fixed Assets: From a perusal of schedule relating to 'Fixed Assets' in the annual report, it is ascertained that there was a sale of fixed assets amounting to Rs.16,62,000 and purchase of fixed assets to the tune of Rs.38,54,000. These will be shown as source and application of funds respectively. (In examination problems information about, sale and purchase of assets can be ascertained by preparing respective Asset Accounts).

III. Investments: A similar perusal of schedule relating to 'investments' gives information that there was a redemption of investment amounting to Rs.5,000 which is a source of fund.

Now the Schedule of Changes in Working Capital and Funds Flow Statement are prepared.

ARASU LIMITED

Schedule of Changes in Working Capital 2004-05

(Rs. '000)

	2003-04	2004-05	Increase	Decrease
Current Assets				
Inventories	1,92,54	1,52,83	-	39,71
Debtors	64,29	51,41	-	12,88
Cash and Bank	18,46	1,40,80	1,22,34	-
Loans and Advances	14,73	17,82	3,09	-
	------------	-----------------		
(A) Total of				
Current Assets	2,90,02	3,62,86		
	------------	-----------------		
Current Liabilities				

Creditors	75,43	88,81	-	13,38
Unpaid Dividend	1,27	1,00	27	-
Provision for Tax	82,87	79,76	3,11	-
Proposed Dividend	14,00	21,00	-	7,00
	------------	------------------		
(B) Total of Current	1,73,57	1,90,57		
Liabilities	------------	------------------		
Working Capital (A)-(B)	1,16,45	1,72,29	-	-
Increase in Working Capital	55,84			55,84
	-------------	-------------	------------	-------------
	1,72,29	1,72,29	1,28,81	1,28,81
	-------------	-------------	------------	-------------

ARASU LIMITED Funds Flow Statement 2004-04

Sources	Rs.	Applications	Rs.
Funds from Operations	7771	Purchase of Fixed Assets	3854
Sale of Fixed Assets	1662	Increase in Working Capital	5584
Redemption of Investment	5		
	9438		**9438**

It may be seen from the above statement that Sources amount to Rs.94,38,000 and Applications amount to Rs.38,54,000, thereby resulting in an increase in Working Capital amounting to Rs.55,84,000. This figure tallies with the increase in working capital as shown by the Schedule of Changes in Working Capital.

Illustration 2: The Balance Sheet of Mathi Limited for two years were as follows:

Liabilities	2004	2005	Assets	2004	2005
Share Capital	40,000	60,000	Land & Buildings	27,700	56,600
Share Premium	4,000	6,000	Plant & Machinery	17,800	25,650
General Reserve	3,000	4,500	Furniture	1,200	750
Profit & Loss A/c	9,750	10,400	Stock	11,050	13,000
5% Debentures		13,000	Debtors	18,250	19,550
Creditors	16,750	18,200	Bank	2,400	2,000
Provision for Taxation	4,900	5,450			
	78,400	**1,17,550**		**78,400**	**1,17,550**

Additional Information

Depreciation written off during the year was:

Plant and Machinery Rs.6,400

Furniture Rs.200

Prepare: A Schedule of Changes in Working Capital and A Statement of Sources and Application of Funds.

Schedule of Changes in Working Capital

				Working Capital	
		2004	**2005**	**Increase**	**Decrease**
		Rs.	**Rs.**	**Rs.**	**Rs.**
Current Assets					
Stock		11,050	13,000	1,950	-
Debtors		18,250	19,550	1,300	-
Bank		2,400	2,000		400
		---------	--------		
	(A)	31,700	34,550		
		---------	--------		
Current Liabilities					
Creditors		16,750	18,200	-	1,450
Provision for Taxation		4,900	5,450	-	550
		---------	--------		
	(B)	21,650	23,650		
		---------	--------		
Working Capital (A) – (B)		10,050	10,900		
Increase in Working Capital		850			850
		---------	--------		
		10,900	10,900	3,250	3,250
		---------	--------		

Calculation of Funds from Operations

Profit and Loss a/c as on 31-12-2005			10,400
Add:	Transfer to Reserve		1,500
	Depreciation –	Plant & Machinery	6,400

		Furniture	200

			18,500

Less:	P&L a/c as on 1-1-2005		9,750

	Funds from Operations		8,750

Land & Building A/c

To Balance b/d	27,700	By Balance c/d	56,600
To Bank Purchase	28,900		
(Balancing figure)	---------		---------
	56,600		56,600
	---------		---------

Plant & Machinery A/c

To Balance b/d	17,800	By Depreciation	6,400
To Bank Purchase	14,250	By Balance c/d	25,650
(Balancing figure)	---------		---------
	32,050		32,050
	---------		---------

Furniture A/c

To Balance b/d	1,200	By Depreciation	200
		By Bank – Sale	250
		(Balancing figure)	
		By Balance c/d	750
	---------		---------
	1,200		**1,200**
	---------		---------

Statement of Sources and Application of Funds

Sources	Rs.	Applications	Rs.
Funds from Operations	8,750	Purchase of Land &	
Share Capital	20,000	Buildings	28,900
Share Premium	2,000	Purchase of Plant &	14,250

Debentures	13,000	Increase in working	850
Sale of Furniture	250	capital	
	44,000		**44,000**

Illustration 3: Following are Balance Sheet of a Limited Co. as on 31st Dec.2003 and 2004.

Liabilities	2003	2004	Assets	2003	2004
Share Capital	61,000	74,000	Plant	45,000	43,000
Reserves	13,000	15,500	Building	50,950	48,000
Creditors	28,000	24,000	Stock	20,500	18,800
Bank Overdraft	18,000	-	Debtors	20,000	16,200
Provision for Taxation	8,000	8,500	Cash	150	180
Profit & Loss A/c.	8,600	8,800	Cash at Bank		2,100
			Goodwill		2,520
	136600	**130800**		**1,36,600**	**1,30,800**

Taking into account the following information, calculate funds from operations:

1) Interim Dividend was paid Rs.2,000.
2) Dividend proposed for Rs. 4,000.
3) Provision of Rs.9,000 was made for Income Tax.
4) Rs. 2000 was written off as depreciation on Plant and Rs.2,950 on Building.
5) Profit on Sale of Fixed Investment Rs. 1,500.

Solution

Calculation of net profit for 2003

	Rs.	Rs.
Credit balance of P & L A/c on 31Dec. 2003		8,800
Less: Credit Balance of P& LA/c on 31Dec.2002		8,600

		200

Add:		
Interim Dividend	2,000	
Proposed Dividend	4,000	
Provision made for Income Tax	9,000	
Provision Made for Reserve	2,500	17,500

Net Profit During the Year		17,700

Particulars	Rs.	Rs.
Net Profit During the Year		17,700
Add:		
Depreciation on Building	2,950	
Depreciation on Plant	2,000	4,950

		22,650
Less:		
Profit on sale of Fixed Investment		1,500

Profit from Business Operations		21,150

The alternative method for calculation of Funds from operations is as follows:

Particulars	Rs.	Particulars	Rs.
To Interim Dividend	2,000	By Opening Balance	8,600
To Dividend Proposed	4,000	By Profit on Sale of Investment	1,500
To Provision for Income Tax	9,000	By Profit from Business Operations (B/f)	21,150
To Provision for Reserve	2,500		
To Plant A/c(Depreciation)	2,000		
To Building A/c	2,950		
(Depreciation) To Closing Balance	8,800		
	31,250		**31,250**

Illustration 4: The following is the Balance Sheet of Anil Corporations Ltd. as on 31st Dec. 2003 and 2004. You are required to prepare a Schedule of Changes in Working Capital and a Funds Flow Statement.

Balance Sheet of Anil Corporation Ltd.

Liabilities	2003	2004	Assets	2003	2004
Share Capital (Paid up):			Land & Buildings	60,000	50,000
11% Cumulative Preference Share		30,000	Plant & Machinery	30,000	50,000
Equity Shares	1,10,000	1,20,000	Debtors	40,000	48,000
General Reserve	4,000	4,000	Stock	60,000	70,000

Profit & Loss A/c	2,000	2,400	Bank	2,400	7,000
9% Debentures	12,000	14,000	Cash	600	1,000
Provision for Taxation	6,000	8,400			
Proposed Dividend	10,000	11,600			
Current Liabilities	49,000	35,600			
	1,93,000	**2,26,000**		**1,93,000**	**2,26,000**

Solution

Schedule of Changes in Working Capital

Particulars	2003	2004	Increase	Decrease
Current Assets:				
Sundry Debtors	40,000	48,000	8,000	
Stock	60,000	70,000	10,000	
Bank	2,400	7,000	4,600	
Cash	600	1,000	400	
	1,03,000	1,26,000		
Current Liabilities:				
Current Liabilities	49,000	35,600	13,400	
	49,000	35,600		
Working Capital (CA-CL)	54,000	90,400		
Net increase in Working Capital	36,400			36,400
	90,400	90,400	36,400	36,400

Funds Flow Statement

Sources	Rs.	Applications	Rs.
Issue of the Preference Shares	30,000	Purchase of Plant and Machinery	20,000
Issue of the Equity Shares	10,000	Provision for Taxation*	6,000
Issue of the Debentures	2,000	Proposed Dividend**	10,000
Sale of the Land and Buildings	10,000	Net Increase in Working Capital	36,400
Funds from Operations	20,400		
	72,400		**72,400**

Working Notes

1. As current Liabilities are separately given, provision for taxation and proposed dividend has not been taken as current liabilities.	
2. Calculations of Issue of Preference Shares:	
Preference share in beginning of 2004	
Preference share raised during the year 2004	30,000
Preference share at the end of 2004	30,000
3. Calculation of Issue of Equity Share:	

Equity Share Capital In the beginning of 2004	1,10,000
Equity Share Capital at the end of 2004	1,20,000
Equity Share Capital issued during the year 2004	10,000
4. Issue of Debenture:	
9% Debenture in the beginning of 2004	12,000
9% Debenture at the end of the year 2004	14,000
9% Debenture issued during the year 2004	2,000
5.Provision for taxation and proposed dividend for 2003 have been presumed	
to be paid in 2004.	
6.Calculations of Sale of Land and Buildings:	
Opening Balance of Land & Building in 2004	60,000
Closing Balance of Land & Building in 2004	50,000
Land and Building purchased during the year 2004	10,000
7.Purchase of Plant & Machinery:	
Opening Balance in 2004	30,000
Closing Balance in 2004	50,000
Purchased during the year	20,000
8.Calculation of Funds from Operations:	
Closing Balance of P & L A/c in 2004	2,400
Add: Non-fund and Non-operating items	
Debited to P & L A/c:	
Provision for taxation	8,400
Proposed Dividend	11,600
	22,400
Less: Opening Balance of P & L A/c	2,000
Fund from Operations	**20,400**

CASH FLOW ANALYSIS

While explaining the concept of ‘fund’ it was mentioned that in a narrower sense the term ‘fund’ is also used to denote cash. The term ‘cash’ in the context of cash flow analysis stands for cash and bank balances. Cash flow refers to the actual movement of cash in and out of an organisation. When cash flows into the organisation it is called cash inflow or positive cash flow. In the same way when cash flows out of the organisation, it is called cash outflow or negative cash flows. Cash flow analysis is an analysis based on the movement of cash and bank balances. Under cash flow analysis, all movements of cash would be considered.

CASH FLOW STATEMENT

A Cash Flow Statement is a statement showing changes in cash position of the firm from one period to another. It explains the inflows (receipts) and outflows (disbursements) of cash over a period of time. The inflows of cash may occur from sale of goods, sale of assets, receipts from debtors, interest, dividend, rent, issue of new shares and debentures, raising of loans, short-term borrowing, etc. The cash outflows may occur on account of purchase of goods, purchase of assets, payment of loans loss on operations, payment of tax and dividend, etc.

A cash flow statement is different from a cash budget. A cash flow statement shows the cash inflows and outflows which have already taken place during a past time period. On the other hand a cash budget shows cash inflows and outflows w hich are expected to take place during a future time period. In other words, a cash budget is a projected cash flow statement.

DEFINITION OF CASH

A statement of cash flow doesn't necessarily only include cash. Certain business assets that operate in much the same manner as cash may be included as well. For instance, a cash flow statement may include bank deposits that the business has the right to demand immediately. It may also include any assets that are sufficiently liquid and anticipate minimal changes in value, such that a cash value can be placed on those instruments. The statement can also include expected or realized returns on investments.

DEFINITION OF CASH FLOW

An accounting statement called the "statement of cash flows", which shows the amount of cash generated and used by a company in a given period. It is calculated by adding non cash charges (such as depreciation) to net income after taxes. Cash flow can be attributed to a specific project, or to a business as a whole. Cash flow can be used as an indication of a company's financial strength.

Cash flow refers to the amount of cash moving in or out of a business. A cash flow statement, also known as the statement of cash flows, describes the cash flow during a given period covered by the statement. The cash flow statement is one of several core financial documents in any business enterprise.

DEFINITION OF 'CASH FLOW STATEMENT'

One of the quarterly financial reports any publicly traded company is required to disclose to the Sec and the public. The document provides aggregate data regarding all cash inflows a company receives from both its ongoing operations and external investment sources, as well as all cash outflows that pay for business activities and investments during a given quarter.

OBJECTIVES OF CASH FLOW STATEMENT

1. To provide information about the cash inflows and cash outflows from operating, financing and investing activities of the firm.
2. To show the impact of the operating, financing and investing activities on cash resources.
3. To tell how much cash came in during the period, how much cash went out and what the net cash flow was during the period.
4. To explain the causes for changes in cash balance.
5. To identify the financial needs and help in forecasting future cash flows.

USES OF CASH FLOW ANALYSIS

A Cash Flow Statement is useful for short-term planning. A business enterprise needs sufficient cash to meet its various obligations in the near future such as payment for purchase o f fixed assets, payment of debts maturing in the near future, expenses of the business, etc. A historical analysis of the different sources and applications of cash will enable the management to make reliable cash flow projections for the immediate future. It may then plan out for investment of surplus or meeting the deficit, if any. Thus, a cash flow analysis is an important financial tool for the management. Its chief advantages are as follows:

1. Helps in Efficient Cash Management

Cash flow analysis helps in evaluating financial policies and cash position. Cash is the basis for all operations and hence a projected cash flow statement will enable ill management to plan and co-ordinate the financial operations properly. The management can know how much cash is needed, fro m which source it will be derived, how much can be generated internally and how much could be obtained fro m outside.

2. Helps in Internal Financial Management

Cash flow analysis provides information about funds which will be available fro m operations. This will help the management in determining policies regarding internal financial management, e.g., possibility o f repayment of long- term debt, dividend policies, planning replacement of plant and machinery, etc.

3. Disclose the Movement of Cash

Cash flow statement discloses the complete story of cash movement. The increase in or decrease of, cash and the reason therefore can be known. It discloses the reasons for low cash balance in spite of heavy operating profits or for heavy cash balance in spite of low profits. However, comparison of original forecast with the actual results highlights the trends of movement of cash which may otherwise go undetected.

4. Discloses Success or Failure of Cash Planning

The extent of success or failure of cash planning can be known by comparing the projected cash flow statement with the actual cash flow statement and necessary remedial measures can be taken.

SIGNIFICANCE OF CASH FLOW STATEMENT

The cash flow statement provides information regarding inflows and outflows of cash of a firm for a period of one year. Therefore cash flow statement is important on the following grounds.

1. Cash flow statement helps to identify the sources from where cash inflows have arisen within a particular period and also shows the various activities where in the cash was utilized.

2. Cash flow statement is significant to management for proper cash planning and maintaining a proper matching between cash inflows and outflows.
3. Cash flow statement shows efficiency of a firm in generating cash inflows from its regular operations.
4. Cash flow statement reports the amount of cash used during the period in various long-term investing activities, such as purchase of fixed assets.
5. Cash flow statement reports the amount of cash received during the period through various financing activities, such as issue of shares, debentures and raising long-term loan.
6. Cash flow statement helps for appraisal of various capital investment programmes to determine their profitability and viability.

Cash flow statement is a statement which shows how the operations of the company affects the cash position of the company during a financial year and therefore companies usually make both cash and funds flow statement.

COMPARISON BETWEEN FUNDS FLOW AND CASH FLOW STATEMENTS

S.No.	Basis of Difference	Fund Flow Statement	Cash Flow Statement
1.	Basis of Analysis	Funds flow statement is based on broader concept i.e. working capital.	Cash flow statement is based on narrow concept i.e. cash, which is only one of the elements of working capital.
2.	Source	Funds flow statement tells about the various sources from where the funds generated with various uses to which they are put.	Cash flow statement stars with the opening balance of cash and reaches to the closing balance of cash by proceeding through sources and uses.
3.	Usage	Funds flow statement is more useful in assessing the long-range financial strategy.	Cash flow statement is useful in understanding the short-term phenomena affecting the liquidity of the business.
4	Schedule of Change in Working Capital	In funds flow statement changes in	In cash flow statement changes in current assets and current

S.No.	Basis of Difference	Fund Flow Statement	Cash Flow Statement
		current assets and current liabilities are shown through the schedule of changes in working capital.	liabilities are shown in the cash flow statement itself.
5	End Result	Funds flow statement shows the causes of changes in net working capital.	Cash flow statement shows the causes the changes in cash.
6	Principle of Accounting	Funds flow statement is in alignment with the accrual basis of accounting.	In cash flow statement data obtained on accrual basis are converted into cash basis.

FORMAT OF CASH FLOW STATEMENT

A cash flow statement is a statement depicting changes in cash position from one period to another i.e. the result of cash flow analysis is given in the cash flow statement. For example if the cash balance of a concern as per its Balance Sheet as on 31st March 2004 is Rs.90,000 and the cash balance as per its Balance Sheet as on 31st March 2005 is Rs.1,20,000, there has been an inflow of cash of Rs.30,000 in the year 2004-05 as compared to the year 2003-04. The cash flow statement explain the reasons for such inflows or outflows of cash as the case may be.

Normally the following are principal sources of inflows of cash:

a) Issue of shares and debentures for cash
b) Sale of fixed assets and investments for cash
c) Borrowings from banks and other financial institution
d) Cash from operations

Outflows of cash generally include:

a) Redemption of shares and debentures by cash
b) Purchase of fixed assets and investments by cash
c) Repayment of loans
d) Cash lost in operations

The following is the format of a cash flow statement:

Cash Flow Statement for the year ending say 31st March 2005

Balance as on 1-4-2004		**Balance as on 1-4-2004**	
Cash in hand	x x x	Bank overdraft (if any)	x x x
Cash at Bank	x x x		
Add: Cash Inflows:		**Cash Outflows**:	
Here the items mentioned		Here the items mentioned	
as sources of cash inflows		as outflows of cash above	
above will be recorded		will be recorded	
Balance as on 31-3-2005		**Balance as on 31-3-2005**	
Bank overdraft (if any)	x x x	Cash in hand	x x x
		Cash at Bank	x x x
	-----------		-----------
	x x x		x x x
	-----------		-----------

The Accounting Standard 3 issued by the Institute of Chartered Accountants of India requires the companies to prepare Cash Flow Statement and present them as part of their Annual Reports.

The important step in the preparation of cash flow statement is the calculation of cash from operations. It is calculated as follows:

The first step in the calculation of cash from operations is the calculation of funds from operations (which is already explained in the lesson on Funds Flow Analysis). To the funds from operations the decrease in current assets and increase in current liabilities will be added (except cash, Bank and Bank O.D.). From the added total increase in current assets and decrease in current liabilities will be deducted (except cash, Bank and Bank O.D.). The resultant figure is cash from operations (Refer Illustration 3).

Proforma of Cash from Operations Statement

Funds from Operations or Funds lost from operations			x x x x
Add:	Decrease in current assets		x x x x
	Increase in current liabilities		x x x x
			---------
			x x x x

Less:	Inecrease in current assets	x x x	
	Decrease in current liabilities	x x x	
		---------	x x x x

Cash from operations or cash lost from operations			

As in the case of Fund Flow Analysis here also we assume **Provision for Taxation** and **Proposed Dividend** as current liabilities.

Illustration 1: From the following balances calculate cash from operations:

Particulars	December 31	
	2004	**2005**
Profit and Loss A/c Balance	75,000	1,55,000
Debtors	45,000	42,000
Creditors	20,000	26,000
Bills Receivable	12,000	15,000
Cash in hand	2,500	3,000
Prepaid expenses	1,600	1,400
Bills Payable	18,000	16,000
Cash at Bank	8,000	10,000
Outstanding expenses	1,200	1,600
Income received in advance	250	300
Outstanding Income	800	900

Additional Information

a) Depreciation written off during the year Rs.10,000
b) Transfer to General Reserve Rs.10,000

Calculation of Funds from Operations

		Rs.
Profit & Loss A/c as on 31st December 2005		1,55,000
Add:	Depreciation	10,000
	Transfer to General Reserve	10,000

		1,75,000

Less:	P & L a/c as on 1st January 2005	75,000

	Funds from Operations	1,00,000

Calculation of Cash from Operations			
	Funds from Operations		1,00,000
Add:	**Decrease in Current Assets**		
	Decrease in Debtors		3,000
	Decrease in Prepaid Expenses		200
	Increase in Current Liabilities		
	Increase in Creditors		6,000
	Increase in Outstanding Expenses		400
	Increase in Income Received in Advance		50

			1,09,650
Less:	**Increase in Current Assets**		
	Increase in Bills Receivables	3,000	
	Increase in Outstanding Income	100	
	Decrease in Current Liabilities		
	Decrease in Bills Payable	2,000	
		----------	5,100

	Cash from Operations		1.04,550

Note: Decrease in current assets means current assets are converted into cash and increase in current liabilities results in further generation of cash. Hence they are added. Increase in current assets and decrease in current liabilities result in outflow of cash. Hence they are deducted.

Illustration 2: Balance Sheets of Somy Thomas as on 1-1-2005 and 31-12-2005 were as follows:

Liabilities	**2004**	**2005**	**Assets**	**2004**	**2005**
	Rs.	**Rs.**		**Rs.**	**Rs.**
Credits	40,000	44,000	Cash	10,000	7,000
Bills payable	25,000	----	Debtors	30,000	50,000
Loans from Bank	40,000	50,000	Stock	35,000	25,000
Capital	1,25,000	1,53,000	Machinery	80,000	55,000
			Land	40,000	50,000
			Building	35,000	60,000
	-----------	----------		-----------	----------

	2,30,000	**2,47,000**		**2,30,000**	**2,47,000**
	-----------	----------		-----------	----------

During the year, a machine costing Rs.10,000 (accumulated depreciation Rs.3,000) was sold for Rs.5,000. The provision for depreciation against machinery as on 1-1-2005 was Rs.25,000 and 31-12-2005 it was Rs.40,000. Net profit for the year 2005 amounted to Rs.45,000. Prepare Cash Flow Statement.

Calculation of Cash from Operations

			Rs.
Net Profit for the year 2005			45,000
Add:	Addition to Provision for Depreciation		18,000
	Loss of Sale of Machinery		2,000

	Funds from Operations		65,000
Add:	Decrease in Stock		10,000
	Increase in Creditors		4,000

			79,000
Less:	Increase in Debtors	20,000	
	Decrease in Bills Payable	25,000	
		--------------	45,000

	Cash from Operations		34,000

Capital A/c

To Drawings (b/f)	17,000	By Balance b/d	1,25,000
To Balance c/d	1,53,000	By Net Profit for the year	45,000
	-----------		-------------
	1,70,000		1,70,000
	-----------		-------------

Machinery A/c

To Balance b/d	1,05,000	By Bank Sale	5,000
(80000 + 25000)		By Provision for Dep.	3,000
		By P&L a/c – Loss	2,000
		By Balance c/d	95,000
	-------------	(55000 + 40000)	------------

	1,05,000		1,05,000
	-------------		------------

Provision for Depreciation A/c

To Machinery a/c	3,000	By Balance b/d	25,000
(Dep. on machinery sold)		By P&L a/c	
To Balance c/d	40,000	Dep. for the current year	18,000
	---------		---------
	43,000		43,000
	---------		---------

Cash Flow Statement

Cash as on 1-1-2005 10,000				
Add:	Inflows		Cash Outflows:	
Cash from Operations 34,000			Drawings	17,000
Loan from Bank		10,000	Purchase of Land	10,000
Sale of Machinery		5,000	Purchase of Building	25,000
			Cash as on 31-12-2005	7,000
		--------		----------
		59,000		59,000
		--------		----------

Illustration 3 : From the following information calculate cash from operations:

Particulars	Rs.
Net Profit for the year	30,000
Total Sales	60,000
Debtors Outstanding in the beginning of the year	20,000
Debtors outstanding at the end of the year	15,000

Solution:

Calculation of Cash from Operations

Particulars	Rs.
Net profit for the year	30,000

Less: Debtors outstanding at the end of the year	15,000
Add: Debtors outstanding in the beginning of the year	20,000
Cash from operations	35,000

Illustration 4 : Calculate Cash from operations from the following information's :

Particulars	Rs.
Sales	70,000
Purchases	40,000
Expenses	8,000
Creditors at the end of the year	15,000
Creditors in the beginning of the year	12,000

Solution

Particulars	Rs.	Rs.
Sales		70,000
Less: Purchases	40,000	
Expenses	8,000	48,000
Profit for the Year		22,000
Add: Creditors at the end of the Year		15,000

		37,000

Less: Creditors at the beginning of the Year		12,000

Cash from Operations		25000

Illustration 5: From the following balances you are required to calculate cash from operations:

Particulars		December 31	
		1992 Rs	**1993 Rs**
Debtors		1,00,000	94,000
Bills receivable		20,000	25,000
Creditors		40,000	50,000
Bills payable		16,000	12,000
Outstanding expenses		2,000	2,400
Prepaid expenses		1,600	1,400
Accrued Income		1,200	1,500
Income received in advance		600	500
Profit made during the year		-	

Solution

Cash from operations	**Rs**	**Rs**
Profit made during the year		2,60,000
Add		
Decrease in debtors	6,000	
Increase in creditors	10,000	
Outstanding expenses	400	
Prepaid expenses	200	
		16,600
Less		
Increase in Bills receivable	5,000	
Decrease in Bills payable	4,000	
Increase in accrued income	300	
Income received in advance	100	
		9,400
Cash from operations		2,67,200

* * * * *

POSSIBLE QUESTIONS
PART A (1 mark)
(Online examinations)

PART B (2 Marks)

1. Define Fund Flow Statement.
2. What is meant by Cash Flow Statement?
3. Explain the concept of Fund Flow Statement in brief.
4. Briefly explain on Cash Flow Statement.
5. Define Fund Flow Statement.

PART –C (6 Marks)

1. From the following profit and loss account you are required to compute cash from operations.

Profit and loss account for the year ending 30 th June 2017

Particulars	Particulars	Particulars	Particulars
To Salaries	5,000	By Gross profit	25,000
To Rent	1,000	By Profit on sale of land	5,000
To Depreciation	2,000	By Income tax refund	3,000
To Loss on sale of plant	1,000		
To Goodwill written off	4,000		
To Proposed dividend	5,000		
To Provision for taxation	5,000		
To Net Profit	10,000		
	33,000		**33,000**

2. From the following balance sheet of A Ltd. As on 31 st March 2012 and 2013, you are required to prepare: (a) A Schedule of Changes in Working Capital (b) A Fund Flow Statement

Liabilities	2012	2013	Assets	2012	2013
Share Capital	100000	100000	Goodwill	12000	12000
General Reserve	14000	18000	Building	40000	36000
Profit & Loss A/C	16000	13000	Plant	37000	36000
Sundry Creditors	8000	5400	Investments	10000	11000
Bills Payable	1200	800	Stock	30000	23400
Provision for Taxation	16000	18000	Bills Receivable	2000	3200
Provision for Doubtful Debts	400	600	Debtors	18000	19000
			Cast at Bank	6000	15200
	155600	**155800**		**155600**	**155800**

The following additional information has also been given:
(a) Depreciation charged on Plant was Rs. 4,000 and on Building Rs. 4,000.
(b) Provision for taxation of Rs. 19,000 was made during the year 2013.
(c) Interim dividend of Rs. 8,000 was paid during the year 2013

3. From the following balances, you are required to calculate cash from operations:

Particulars	December31	
	2016	2017
Debtors	50000	47000
Bills Receivable	10000	12500
Creditors	20000	25000
Bills Payable	8000	6000
Outstanding Expenses	1000	1200
Prepaid Expenses	800	700
Accrued Income	600	750
Income received in Advance	300	250
Profit made during the year	-	130000

4. The following are the balance sheets of JK Ltd as on 31st December 1990 and 1991

Balance Sheet

Liabilities	31-12-90 Rs.	31-12-91 Rs.	Assets	31-12-90 Rs.	31-12-91 Rs.
Pref. Share Capital	-	10,000	Fixed assets	41,000	40,000
Equity Share Capital	40,000	40,000	Less: Depreciation	11,000	15,000
General Reserve	2,000	2,000		**30,000**	**25,000**
Profit & Loss a/c	1,000	1,200	Debtors	20,000	24,000
Debentures	6,000	7,000	Stock	30,000	35,000
Creditors	12,000	11,000	Prepaid Expenses	300	500
Provision for Tax	3,000	4,200	Cash in hand	1,200	3,500
Proposed Dividend	5,000	5,800			
Bank Overdraft	12,500	6,800			
Total	**81,500**	**88,000**	**Total**	**81,500**	**88,000**

5. From the following prepare a statement showing changes in working capital during 1999 :

Liabilities	1998 (Rs.)	1999 (Rs.)	Assets	1998 (Rs.)	1999 (Rs.)
Share Capital	6,00,000	6,00,000	Fixed Assets	10,00,000	11,20,000
Reserves	50,000	1,80,000	Less: Dep.	3,70,000	4,60,000
P & L A/c	40,000	65,000		**6,30,000**	**6,60,000**
Debentures	3,00,000	2,50,000	Stock	2,40,000	3,70,000
Creditors for goods	1,70,000	1,60,000	Book Debts	2,50,000	2,30,000
Provision for IT	60,000	80,000	Cash in hand and at Bank	80,000	60,000
			Preliminary Expenses	20,000	15,000
	12,20,000	**13,35,000**		**12,20,000**	**13,35,000**

6. From the following summarized Balance Sheet of Shri Ram Ltd., prepare a Schedule of Changes in Working Capital and a Statement of Sources and application of funds :

Liabilities	1998 (Rs.)	1999 (Rs.)	Assets	1998 (Rs.)	1999 (Rs.)
Share Capital	4,00,000	5,75,000	Plant	75,000	1,00,000
Creditors	1,06,000	70,000	Stock	1,21,000	1,36,000
Profit &Loss A/c	14,000	31,000	Debtors	1,81,000	1,70,000
			Cash	1,43,000	2,70,000
	5,20,000	**6,76,000**		**5,20,000**	**6,76,000**

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Karpagam Academy of Higher Education
(Deemed University Established Under Section 3 of UGC Act, 1956)
Coimbatore - 641 021.
Management Accounting (16CCU502A)

UNIT III

S.NO	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
1	_____ May be regarded as the life blood of a business	Working capital	Current asset	Fixed asset	Current liability	Working capital
2	There are ______ concepts of working capital	One	Two	Three	Four	Two
3	The concepts of working capital _____	Gross concept	Net concept	Both a and b	Working capital	Both a and b
4	The term _____ represent the difference between current assets and current liabilities	Gross working capital	Net working capital	Both a and b	Working capital	Net working capital
5	The networking capital can be ____	positive	Negative	positive or negative	positive and negative	positive or negative
6	As indicated ____ concepts of working capital have functional significance	Net	Gross	Net or gross	Net and gross	Net and gross
7	At the beginning of a business venture cash is provided by ______	Owners	Leaders	Owners and leaders	Owners or leader	Owners and leaders
8	______ is essentially circulating capital	Fixed assets	Working capital	Stock	Liabilities	Working capital
9	The classification of working capital into _____ components	One	Two	Three	Four	Two

10	______ component represents the value of the current assets required on a continuing basis over the entire year	Fixed working capital	Permanent working capital	Both a and b	Fluctuating Working	Both a and b
11	_______ working capital can further e classified as regular working capital and reserve working capital	permanent	Temporary	Variable	Adequate	permanent
12	______ represents a certain amount of fluctuations in current assets during a short period.	Fixed working capital	permanent working capital	Temporary working capital	Fluctuating Working	Temporary working capital
13	A business firm must maintain an _____ of working in order to run its business smoothly.	permanent	Fixed	Temporary	Adequate	Adequate
14	Adequate working capital will lead inefficiency _____ in costs and reduction in profits.	Increase	Decrease	Both a and b	Negative	Increase
15	The amount of ______ reduces the cost of purchases.	Cash discount	Goodwill	Credit worthiness	Ability to face cris	Cash discount
16	_____ enables a business to without stand periods of depression smoothly.	Cash discount	Good will	Credit worthiness	Ability to face	Ability to face
17	Making prompt payment is a base to create and maintain _____	Cash discount	Good will	Ability to face crisis	Credit	Good will
18	_____ of the firm can not work without adequate working capital.	Current assets	Total assets	Fixed assets	Fluctuating Assets	Fixed assets
19	A sound system of ______ enables a concern to pay regular dividends to its investors.	Assets	Liabilities	Working capital	Stock	Working capital
20	The _____ manager is always interested in obtaining the working capital at the right time, at a cost and the best	Financial	Marketing	Sales	Purchase	Financial
21	The _____ level cannot be expected to reduce at any time.	Minimum	Maximum	Medium	Equal	Minimum
22	______ Working capital should be provided in such a manner that the enterprise may have its uninterrupted use	Long term	Short term	Internal	External	Long term
23	_______ is the most important source for raising the permanent working capital	Floating of debentures	Issue of share	Pouching back of profits	Loans	Issue of share

24	Shares are of _____ types	One	Two	Three	Four	Two
25	____ amount of permanent capital should be raised by the issue of shares	Minimum	Maximum	Medium	Equal	Maximum
26	____ is also an important source of long term working capital.	Floating of debentures	Issue of shares	Public deposit	Loans	Floating of debentures
27	______ means the reinvestment by a concern of its surplus earning in its business.	Ploughing back of profit	Floating of debentures	Long term loans	public deposit	Ploughing back of profit
28	Provide _____ types of loans long term, medium term short term loans.	One	Two	Three	All	All
29	______ type of finance is ordinary repayable in installments	Ploughing back of profit	Floating of debentures	long term loans	Public deposits	long term loans
30	________ covers the need of working capital financing day to day business requirement.	Long term fund	Short term fund	Internal	External	Short term fund
31	________ covers the need of working capital financing day to day business requirement.	Long term fund	Short term fund	Internal	External	Short term fund
32	Short term working capital are of _____ types.	One	Two	Three	Four	One
33	The _____ reserve provides a good source of for working capital.	Depreciation fund	Provision for tax	Accrued expenses	Revenue Reserve	Provision for tax
34	_______ Constitute as a source of working.	Depreciation	Provision for tax	Accrued expenses	Revenue Reserve	Accrued expenses
35	The firm can post pone the payment of expenses for _____ period.	Short	Long	Maximum	Minimum	Short
36	The ______ extended by one business enterprise on another on the purchase and sale of goods.	Credit papers	Trade credit	Bank credit	Customer’s credit	Trade credit
37	_____ can be discounted with a bank.	Credit papers	Trade credit	Bank credit	Customer’s credit	Credit papers

38	______ provides working capital in the forum of over drafts, cash credit, short term, loans etc.	Credit papers	Trade credit	Bank credit	Customer's credit	Bank credit
39	______ governments, sometimes, provide, short term finance on easy terms.	Central	State	central & state	None of the above	central & state
40	_______ is often obtained at low rate interest.	customer's credit	Government	Loans from directors	Security of employee	Loans from directors
41	_______ is required to make deposits their employer companies.	Customers credit	Government	Loans from directors	Security of employee	Security of employee
42	______ is the life blood of a business.	Assets	Liabilities	Working capital	Loan	Working capital
43	Working capital = __________	Current assets – current liabilities	Current liabilities -	Current assets + current	fixed assets + current assets	Current assets – current liabilities
44	Average cost per month = _________	Cost of raw material / 12	cost of raw material + 12	Cost of raw material X 12	Cost of raw material – 12	Cost of raw material / 12
45	Accounts _________ are collected from debtor's cash into firm.	Payable	Receivables	Both a and b	Acceptable	Receivables
46	_______ is not a method of cost ascertainment like job costing or contract costing.	Standard costing	Marginal costing	Working capital	Budgetary control	Marginal costing
47	For _______ marginal costing is more helpful to the management.	Planning	co-ordinating	Decision making	Staffing	Staffing
48	In ________ costing, only variable items of costs are taken into account.	Standard	Marginal	Working capital	Budgetary control	Marginal
49	_______ is not allocated to cost unit	Fixed costs	Variable	Both a and b	Semi - variable Cost	Variable
50	Marginal cost means the _______ thing as variable cost.	Same	Different	Variable	Fixed	Same
51	The accountant's concept of ______ different from economist's concept of marginal cost.	Total cost	Average cost	Additional cost	Marginal cost	Marginal cost

52	Economists define marginal cost as the producing one additional unit.	Total cost	Average cost	Additional cost	Marginal cost	Additional cost
53	Additional unit shall include an element of ____ also	Fixed cost	Variable cost	Total cost	Semi - variable Cost	Fixed cost
54	Marginal cost = _________	prime cost – total variable	Total variable cost – prime	Prime cost + total variable	Prime cost + total fixed	Prime cost + total variable cost
55	Marginal cost = _________	Total cost – fixed cost	Total cost – variable cost	Total cost + fixed cost	Total cost + variable cost	Total cost – fixed cost
56	Total cost 400, fixed cost Rs. 200 marginal cost =______	600	200	500	100	200
57	Marginal cost = ______	Increase in total cost / increase in	Decrease in total cost /	Increase in total cost X increase	Neither Increase nor	Increase in total cost / increase in
58	Total cost Rs. 600 fixed cost Rs. 200 marginal cost ______	100	200	800	400	400
59	Total cost Rs.800 fixed cost Rs. 200 marginal cost = ______	600	800	1000	200	600
60	______ is one which tends to be unaffected by variation in volume of output.	Total cost	Average cost	Marginal cost	Fixed cost	Fixed cost

UNIT-IV

SYLLABUS

Marginal Costing - Absorption versus Variable Costing: Distinctive features and income determination. Cost-Volume-Profit Analysis, Profit / Volume ratio. Break-even analysis – Angle of Incidence, Margin of Safety.

INTRODUCTION

By analyzing the Behaviour of costs in relation to changes in volume of output it becomes evident that there are some items of costs which tend to vary directly with the volume of output, whereas there are others which tend to vary with volume of output, are called variable cost and those remain unaffected by change in volume of output are fixed cost or period costs.

Marginal costing is a study where the effect on profit of changes in the volume and type of output is analyzed. It is not a method of cost ascertainment like job costing or contract costing. It is a technique of costing oriented towards managerial decision making and control.

Marginal costing, being a technique can be used in combination with other technique such as budgeting and standard costing. It is helpful in determining the profitability of products, departments, processes, and cost centres. While analyzing the profitability, marginal costing interprets the cost on the basis of nature of cost. The emphasis is on Behaviour of costs and their impact on profitability

DEFINITION

Marginal costing is defined by the ICWA, India as "the ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs, and variable costs"

Batty defined Marginal Costing as, "a technique of cost accounting which pays special attention to the Behaviour of costs with changes in the volume of output"

Kohler‟s Dictionary for Accounting defines Marginal Costing "as the ascertainment of marginal or variable costs to an activity department or products as compared with absorption costing or direct costing"

The method of charging all the costs to production is called absorption costing.

Kohler‟s dictionary for Accountants defines it as "the process of allocating all or a portion of fixed and variable production costs to work – in – process, cost of sales and inventory". The net profits ascertained under this system will be different from that under marginal costing because of

- ❖ Difference in stock valuation
- ❖ Over and under – absorbed overheads

Direct costing is defined as the process of assigning costs as they are incurred to products and services.

FEATURES OF MARGINAL COSTING

The following are the special features of Marginal Costing:

Marginal costing is a technique of working of costing which is used in conjunction with other methods of costing (Process or job)

- ❖ Fixed and variable costs are kept separate at every stage. Semi –
- ❖ Variable costs are also separated into fixed and variable.
- ❖ As fixed costs are period costs, they are excluded from product cost or cost of production or cost of sales. Only variable costs are considered as the cost of the product.
- ❖ As fixed cost is period cost, they are charged to profit and loss account during the period in which they incurred. They are not carried forward to the next year's income.
- ❖ Marginal income or marginal contribution is known as the income or profit.
- ❖ The difference between the contribution and fixed costs is the net profit or loss.
- ❖ Fixed costs remains constant irrespective of the level of activity.

- Sales price and variable cost per unit remains the same.
- Cost volume profit relationship is fully employed to reveal the state of profitability at various levels of activity.

ASSUMPTIONS IN MARGINAL COSTING

The technique of marginal costing is based on the following assumptions:

1. All elements of costs can be divided into fixed and variable.
2. The selling price per unit remains unchanged at all levels of activity.
3. Variable cost per unit remains constant irrespective of level of output and fluctuates directly in proportion to changes in the volume of output.
4. Fixed costs remain unchanged or constant for the entire volume of production.
5. Volume of product is the only factor which influences the costs

CHARACTERISTICS OF MARGINAL COSTING

The essential characteristics and mechanism of marginal costing technique may be summed up as follows:

1. **Segregation of cost into fixed and variable elements:** In marginal costing, all costs are segregated into fixed and variable elements.
2. **Marginal cost as product cost:** Only marginal (variable) costs are charged to products.
3. **Fixed costs are period costs:** Fixed cost are treated as period costs and are charged to costing profit and loss account of the period in which they are incurred.
4. **Valuation of inventory:** The work – in – progress and finished stocks are valued at marginal cost only.
5. **Contribution is the difference between sales and marginal cost:** The relative profitability of the products or departments is based on a study of "contribution" made by each of the products or departments.

ADVANTAGES OF MARGINAL COSTING

Marginal costing is an important technique of managerial decision making. It is a tool for cost control and profit planning. The following are the advantages of marginal costing technique:

1. Simplicity

The statement propounded under marginal costing can be easily followed as it breaks up the cost as variable and fixed.

2. Stock Valuation

Stock valuation cab be easily done and understood as it includes only the variable cost.

3. Meaningful Reporting

Marginal costing serves as a good basis for reporting to management. The profits are analyzed from the point of view of sales rather than production.

4. Effect on Fixed Cost

The fixed costs are treated as period costs and are charged to Profit and Loss Account directly. Thus, they have practically no effect on decision making.

5. Profit Planning

The Cost – Volume Profit relationship is perfectly analysed to reveal efficiency of products, processes, and departments. Break – even Point and Margin of Safety are the two important concepts helpful in profit planning.

6. Cost Control and Cost Reduction

Marginal costing technique is helpful in preparation of flexible budgets as the costs are classified into fixed and variable. The emphasis is laid on variable cost for control. The constant focus is on cost and volume and their effect on profit pave the way for cost reduction.

7. Pricing Policy

Marginal costing is immensely helpful in determination of selling prices under different situations like recession, depression, introduction of new product, etc. Correct pricing can be developed under the marginal costs technique with the help of the cost information revealed therein.

8. Helpful to Management

Marginal costing is helpful to the management in exercising decisions regarding make or buy, exporting, key factor and numerous other aspects of business operations.

LIMITATIONS OF MARGINAL COSTING

Following are the limitations of marginal costing:

1. Classification of Cost

Break up of cost into fixed and variable portion is a difficult problem. More over clear cost division of semi – variable or semi – fixed cost is complicated and cannot be accurate.

2. Not Suitable for External Reporting

Since fixed cost is not included in total cost, full cost is not available to outsiders to judge the efficiency.

3. Lack of Long – term Perspective

Marginal costing is most suitable for decision making in a short term. It assumes that costs are classified into fixed and variable. In the long term all the cost are variable. Therefore it ignores time element and is not suitable for long term decisions.

4. Under Valuation of Stock

Under marginal costing only variable costs are considered and the output as well as stock are undervalued and profit is distorted. When there is loss of stock the insurance cover will not meet the total cost.

5. Automation

In these days of automation and technical advancement, huge investments are made in heavy machinery which results in heavy amount of fixed costs. Ignoring fixed cost in this context for decision making is irrational.

6. Production Aspect is Ignored

Marginal costing lays too much emphasis on selling function and as such production aspect has been considered to be less significant. But from the business point of view, both the functions are equally important.

7. Not Applicable in all Types of Business

In contract type and job order type of businesses, full cost of the job or the contract is to be charged. Therefore it is difficult to apply marginal costing in all these types of businesses.

8. Misleading Picture

Each product is shown at variable cost alone, thus giving a misleading picture about its cost.

9. Less Scope for Long – term Policy Decision

Since cost, volume, and profits are interlinked in price determination, which can be changed constantly, development of long term pricing policy is not possible.

MARGINAL COSTING AND ABSORPTION COSTING

Absorption costing charges all the costs i.e., both the fixed and variable fixed to the products, jobs, processes, and operations. Marginal costing technique charges variable cost. Absorption is not any specific method of costing. It is common name for all the methods where the total cost is charged to the output.

Absorption Costing is defined by I.C.M.A, England as "the practice of charging all costs, both fixed and variable to operations, processes, or products"

From this definition it is inferred that absorption costing is full costing. The full cost includes prime cost, factory overheads, administration overheads, selling and distribution overheads.

DISTINCTION BETWEEN ABSORPTION COSTING AND MARGINAL COSTING

Absorption Costing	Marginal Costing

1. Total cost technique is the practice of charging all cost, both variable and fixed to operations, process or products.	1. Marginal costing charges only variable cost to products, process, or operations and excludes fixed cost entirely.
2. It values stock at the cost which includes fixed cost also.	2. It values stock at total variable cost only. This results in higher value of stock under absorption costing than in marginal costing.
3. It is guided by profit which is the excess of sales over the total costs in solving managerial problems	3. It focuses its attention on Contribution which is excess of sales over variable cost.
4. In total cost technique, there is a problem of apportionment of fixed costs which may result in under or over recovery of expenses.	4. It excludes fixed cost. Therefore, there is no question of arbitrary apportionment.

The difference between marginal costing and absorption costing is shown with the help of the following examples.

DIFFERENTIAL COSTING

The concept of differential cost is a relevant cost concept in those decision situations which involve alternative choices. It is the difference in the total costs of two alternatives. This helps in decision making. It can be determined by subtracting the cost of one alternative from the cost of another alternative. Differential costing is the change in the total cost which results from the adoption of an alternative course of action. The alternative may arise on account of sales, volume, price change in sales mix, etc decisions. Differential cost analysis leads to more correct decisions than more marginal costing analysis. In this technique the total costs are considered and not the cost per unit. Differential costs do not form part of the accounting system while marginal costing can be adapted to the routine accounting itself. However, when decisions involve huge amount of money differential cost analysis proves to be useful.

In the illustration given below, differential cost at levels of activity has been shown:

	Alternative I	Alternative II	Differential cost
Activity level	80%	100%	
Sales (Rs)	80000	100000	20000
Direct materials	40000	50000	10000
Direct labour	16000	20000	4000
Variable overheads	4000	5000	1000
Fixed overheads	3000	3000	-
Cost of sales	63000	78000	15000

Differential cost is generally confused with marginal cost. Of course, these two techniques are similar in some aspects but these also differ in certain other respects.

Similarities

i. Both the differential cost analysis and marginal cost analysis are based on the classification of cost into fixed and variable. When fixed costs do not change, both differential and marginal costs are same.

ii. Both are the techniques of cost analysis and presentation and are used by the management in formulating policies and decision making.

Dissimilarities

i. Marginal cost may be incorporated in the accounting system where as differential cost are worked out for reporting to the management for taking certain decisions.

ii. Entire fixed cost are excluded from costing where as some of the relevant fixed costs may be included in the differential cost analysis

iii. In marginal costing, contribution and p/v ratio are the main yardstick for evaluating performance and decision making. In differential cost analysis emphasis is made between differential cost and incremental or decremental revenue for making policy decisions

iv. Differential cost analysis may be used in absorption costing and marginal costing.

MARGINAL COST

Marginal cost is the cost of producing one additional unit of output. It is the amount by which total cost increases when one extra unit is produced or the amount of cost which can be avoided by producing one unit less.

The ICMA, England defines marginal cost as, "the amount of any given volume of output by which the aggregate cost are charged if the volume of output is increased or decreased by one unit".

In practice, this is measured by the total cost attributable to one unit. In this context, a unit may be single article, a batch of articles, an order, a stage of production, a process etc., often managerial costs, variable costs are used to mean the same.

FEATURES OF MARGINAL COST

- It is usually expressed in terms of one unit.
- It is charged to operation, processes, or products.
- It is the total of prime cost plus variable overheads of one unit

MARGINAL COST STATEMENT

In marginal costing, a statement of marginal cost and contribution is prepared to ascertain contribution and profit. In this statement, contribution is separately calculated for each of the product or department. These contributions are totaled up to arrive at the total contribution. Fixed cost is deducted from the total contribution to arrive at the profit figure. No attempt is made to apportion fixed cost to various products or departments.

MARGINAL COST EQUATION

For convenience the element of cost statement can be written in the form of an equation as given below:

Sales – Variable Cost = Fixed Cost plus or minus Profit or Loss. Or

Sales – Variable Cost = Fixed Cost plus or minus Profit or Loss

In order to make profit, contribution must be more than fixed cost and to avoid loss, contribution should be equal to fixed cost.

The above equation can be illustrated in the form of a statement

APPLICATION OF MARGINAL COSTING

1. Fixation of Selling Price:

Price is one of the most significant factor that determines the market for the prodicts as well as the volume of profit for the organization. Under normal circumstances, the price of a product must cover the total cost of theat product plus a margin of profit. However under certain special circumstances, price has to be fixed even below the total cost

2. Accepting bulk orders:

Some bulk orders may be received from local dealers or foreign dealers asking for a price which is below the market price. This calls for a decision to accept or reject the order. The order from a local dealer should not be accepted at price below the market price because it will affect the normal market and goodwill of the company.

3. Make or buy Decision:

In a make or buy decision the price quoted by the outside suppliers should be compared with the marginal cost of producing the component parts. If the outside price of the component is lower than the marginal cost of producing it , it is worth buying.

4. Selection of suitable product Mix:

When a factory manufactures more than one product a problem is faced by the management as to which product will give maximum profits. The solution is the products which give the maximum contribution are to be retained and their production should be increased.

5. Key factor

It is also known as limiting factor. A key factor is one which restricts production and profit of a business. It may arise due to the shortage of material, labour, capital and sales. Normally where there is no limiting factor the selection of the product will be on the basis of the highest.

6. Maintaining a desired level of profit:

Management may be interested in maintaining a desired level of profits. The sales required to earn a desired level of profits can be ascertained by the marginal techniques.

7. Alternatives methods of production

Marginal costing is helpful in comparing the alternative methods of productioin.

8. Determination of optimum level of activity:

The technique of marginal costing helps the management in determining the optimum level of activity. To make such a decision, contribution at different levels of activity can be found. The level of activity which gi ves the highest contribution will be the optimum level.

9. Evaluation of performance:

Evaluation performance efficiency of various department or products lines can be made with the help of marginal cost. The management has to discontinue the production of non profitable products so as to maximize the profits. In such cases, decision to discontinue will be on the basis of the lowers contribution.

10. Decision Making:

Decision making is a process of selecting the best course of action from a number of availed alternatives. Problems like selection of the method of manufacture, using the production capacity for different products, continuing, dropping of a product showing a loss, expansion or change in market call for a decision.

COST VOLUME PROFIT ANALYSIS

Cost Volume Profit Analysis (C V P) is a systematic method of examining the relationship between changes in the volume of output and changes in total sales revenue, expenses (costs) and net profit. In other words. it is the analysis of the relationship existing amongst costs, sales revenues, output and the resultant profit.

To know the cost, volume and profit relationship, a study of the following is essential :

(1) Marginal Cost Formula

(2) Break-Even Analysis

Marginal Costing and Cost Volume Profit Analysis

(3) Profit Volume Ratio (or) PV Ratio

(4) Profit Graph

(5) Key Factors and

(6) Sales Mix

Objectives of Cost Volume Profit Analysis

The following are the important objectives of cost volume profit analysis:

(1) Cost volume is a powerful tool for decision making.

(2) It makes use of the principles of Marginal Costing.

(3) It enables the management to establish what will happen to the financial results if a specified level of activity or volume fluctuates.

(4) It helps in the determination of break-even point and the level of output required to earn a desired profit.

(5) The PV ratio serves as a measure of efficiency of each product, factory, sales area etc. and thus helps the management to choose a most profitable line of business.

(6) It helps us to forecast the level of sales required to maintain a given amount of profit at different levels of prices.

Marginal Cost Statement

	Rs.
Sales	xxxxx
Less: Variable Cost	(xxxx)

Contribution	xxxxx
Less: Fixed Cost	(xxxx)

Profit / Loss	xxxx

Illustration No.1:

A company is manufacturing three products X, Y and Z. It supplies you the following information:

	Products		
	X (Rs)	**Y (Rs)**	**Z (Rs)**
Direct Materials	**2500**	**10000**	**1000**
Direct Labour	**3000**	**3000**	**500**
Variable Overheads	**2000**	**5000**	**2500**
Sales	**10000**	**20000**	**5000**

Total fixed overheads Rs. 3000/-

Prepare a marginal cost statement and determine profit and loss.

Solution:

Marginal Cost Statement

Products

	X (Rs)	Y (Rs)	Z (Rs)	Total (Rs)
Sales (A)	10000	20000	5000	35000
Direct materials	2500	10000	1000	13500
Direct Labour	3000	3000	500	6500
Variable Overheads	2000	5000	2500	9500
Marginal Cost (B)	7500	18000	4000	29500

Marginal Contribution

(A – B)	2500	2000	1000	5500
Less:FixedCost				3000

		NetProfit		2500

Contribution:

Contribution is the difference between selling price and variable cost of one unit. The greater contribution from the selling unit indicates that the variable cost is less compared to selling price. Total contribution is the number of units

Multiplied by contribution per unit. Contribution will be equal to the total fixed costs at break even point where profit is zero.

Illustration No.2:

Calculate contribution and profit from the following details: Sales

Rs. 12000

Variable Cost Rs. 7000

Fixed Cost Rs. 4000

Solution:

Contribution = Sales – Variable cost

Contribution = Rs. 12000 – Rs. 7000 = **Rs. 5000**

Profit = Contribution – Fixed Cost

Profit = Rs. 5000 – Rs. 4000 = **Rs. 1000**

Profit / Volume Ratio

This is the ratio of contribution to sales. It is an important ratio analysing the relationship between sales and contribution. A high p/v ratio indicates high profitability and low p/v ratio indicates low profitability. This ratio helps in comparison of profitability of various products. Since high p/v ratio indicateas high profits, the objective of every organization should be to improve or increase the p/v ratio.

P / V Ratio = Contribution / Sales x 100 or C / S x 100

When profits and sales for two consecutive periods are given, the following formula can be applied:

Change in Profit

Change in Sales

P / V ratio is also used in making the following type of calculations:

a) Calculation of Break even point.

b) Calculation of profit at a given level of sales.

c) Calculation of the volume of sales required to earn a given profit.

d) Calculation of profit when margin of safety (discussed below) is given.

e) Calculation of the volume of sales required to maintain the present level of profit if selling price is reduced.

Volume or activity can be expressed in any one of the following ways:

1. Sales capacity expressed as a percentage of maximum sales.
2. Sales value in terms of money.
3. Units sold.
4. Production capacity expressed in percentages.
5. Value of cost of production.
6. Direct labour hours.
7. Direct labour value.
8. Machine hours.

The factors which are usually involved in this analysis are:

a) Selling price b) Sales volume c) Sales mix

d) Variable cost per unit e) Total fixed cost

Illustration No:3

Sales Rs. 2,00,000

Variable Cost Rs.100000

You are required to calculate: P / V Ratio

Contribution=Selling Price - Variable Cost

=Rs. 2,00000- 1,00,000=Rs.100000

P/V Ratio= Contribution/Sales *100= 100000/200000*100=50%

BREAK EVEN ANALYSIS

Break-Even Analysis is also called Cost Volume Profit Analysis. The term Break-Even Analysis is used to measure inter relationship between costs, volume and profit at various level of activity. A concern is said to break-even when its total sales are equal to its total costs. It is a point of no profit no loss. This is a point where contribution is equal to fixed cost. In other words, the break-even point where income is equal to expenditure {or) total sales equal to total cost.

The break-even point can be calculated by the following formula:

Break-Even Point = Fixed cost/PV Ratio

Illustration No.4

From the following particulars find out break-even point:

Fixed Expenses Rs. 1.00.000

Selling price Per unit Rs. 20

Variable cost per unit Rs. 15

Solution:

Contribution per unit = Selling Price per unit - Variable Cost per unit

= Rs. 20 - Rs. 15 = Rs. 5

=Rs. 1.00.000/5 =20.000 units

= 20,000 x Rs. 20 = Rs. 4,00,000

MARGIN OF SAFETY

The excess of actual or budgeted sales over the break-even sales is known as the margin of safety.

Margin of safety = actual sales - break-even sales

So this shows the sales volume which gives profit. Larger the margin of safety greater is the profit.

Marginal safety =Budget sales - break-even sales

When margin of safety is not satisfactory, the following steps may be taken into account:

a) Increase the volume of sales.
b) Increase the selling price.
c) Reduce fixed cost.
d) Reduce variable cost.
e) Improve sales mix by increasing the sale of products with P/V ratio.

The effect of a price reduction will always reduce the P / V ratio, raise the break even point shorten the margin of safety.

Illustration No.5

From the following particulars, calculate Margin of safety :

Fixed cost Rs. 1,00,000

Variable cost Rs. 1,50,000

Total Sales Rs. 3,00,000

Solution:

Margin of Safety = Sales - Variable Cost

= Rs. 3,00,000 - 1,50,000 = Rs. 1,50,000

Profit = Contribution - Fixed Cost

= Rs. 1,50,000 - 1,00,000 = Rs.50,000

PV Ratio 50%

50,000 /100x 50 = Rs. 1,00,000

ANGLE OF INCIDENCE

This is obtained from the graphical representation of sales and cost. When sales and output in units are plotted against cost and revenue the angle formed between the total sales line and the total cost line at the break-even point is called the angle of incidence.

Large angle indicates a high rate of profit while a narrow angle would show a relatively low rate of profit.

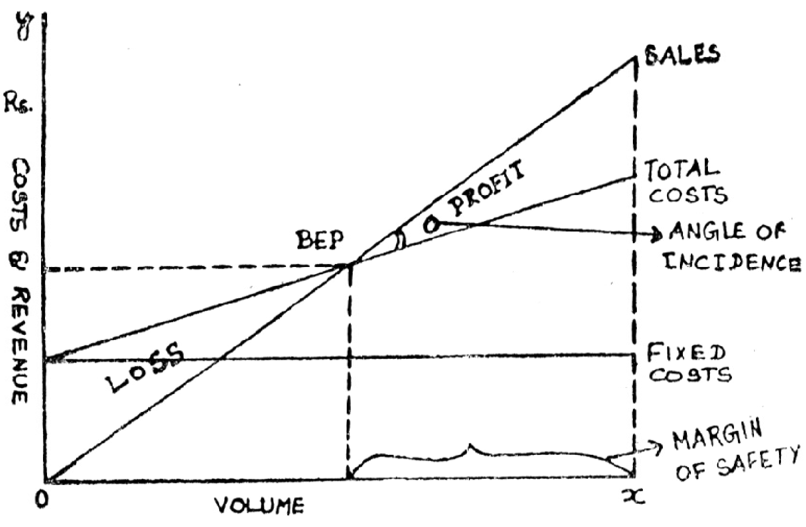
PROFIT GOAL

To earn a desired amount of profit i.e., a profit goal can be reached by the formula given below

$$\text{Sales volume to reach profit goal} = \frac{\text{Fixed cost + Desired profitability}}{\text{Contribution ratio}}$$

BREAK EVEN CHART

These depict the interplay of three elements viz., cost, volume, and profits. The charts are graphs which at a glance provide information of fixed costs, variable costs, production / sales achieved profits etc., and



From the above break-even chart, we can understand the following points :

(1) Cost and sales revenue are represented on vertical axis, i.e., Y-axis.

(2) Volume of production or output in units are plotted on horizontal axis, i.e., X-axis.

(3) Fixed cost line is drawn parallel to X-axis.

(4) Variable costs are drawn above the fixed cost line at different level of activity. The variable cost line is joined to fixed cost line at zero level of activity.

(5) The sales line is plotted from the zero level, it represents sales revenue.

(6) The point of intersection of total cost line and sales line is called the break-even point which means no profit no loss.

(7) The margin of safety is the distance between the break-even point and total output produced.

(8) The area below the break-even point represents the loss area as the total sales and less than the total cost.

(9) The area above the break-even point represents profit area as the total sales more than the cost.

(10) The sales line intersects the total cost line represents the angle of incidence. The large angle of incidence indicates a high rate of profit and vice versa.

II. CASH BREAK-EVEN POINT

In cash break-even chart, only cash fixed costs are considered. Non-cash items like depreciation etc. are excluded from the fixed costs for computation of break-even point. Cash Break-Even Chart depicts the level of output or sales at which the sales revenue will be equal to total cash outflow. It is computed as under:

Cash Break-Even Point = Cash Fixed Costs/Contribution per unit

Advantages of Break-Even Chart

(1) It enables to determine the profit or loss at different levels of activities.

(2) It is useful to measure the relationship between cost volume and profit.

(3) It helps to determine the break-even units, i.e., output and sales volume.

(4) It helps to measure the profitability of various products.

(5) It facilitates most profitable product mix to be adopted.

(6) It assists future planning and forecasting.

(7) It enables to determine total cost, fixed cost and variable cost at different levels of activity.

(8) This chart is very useful for effective cost control.

LIMITATIONS OF BREAK-EVEN CHART

Limitations of Break-Even Chart

(1) It is based on number of assumptions which may not hold good.

(2) Break-even charts are rarely of value in a multi-product situation.

(3) A break-even chart does not take into consideration semi-variable cost, valuation of opening stock and closing stock.

(4) Determination of selling price is based on many factors which will affect the constant selling price.

(5) Capital employed, Government policy, Market environment etc. are the important aspects for managerial decisions. These aspects are not considered in break-even chart.

ANGLE OF INCIDENCE

This is the angle of intersection between the sales line and the total cost line. The larger the angle the greater is the profit or loss, as the case may be.

PROFIT VOLUME GRAPH

Profit volume graph is a pictorial representation of the profit volume relationship. It shows profit and loss account at different volumes of sales. It is simplified form of break even chart as it clearly represents the relationship of profit to volume of sales. It is possible to construct a profit volume graph for any data relating to a business firm where a break even chart can be drawn. A profit volume graph may be preferred to a break even chart as profit or losses can be directly read at different levels of activity.

The construction of profit volume graph involves the following steps:

1. Scale of sale is selected on horizontal axis and that for profit or loss are selected on vertical axis. The area below the horizontal axis is the loss area and that above it is the profit area.

2. Points of profits of corresponding sales are plotted and joined. The resultant line is profit / loss line

Advanced Problems in Marginal Costing

Problem No.1 From the following data calculate

1. Numbers of units to be sold to earn a profit of Rs.120000

2. Sales to earn a profit of Rs.120000

Selling price per unit	Rs.40
Variable selling cost per unit	Rs.3
Variable manufacturing cost per unit	Rs.22

Fixed factory overhead Rs.160000

Fixed selling cost Rs.20000

Solution

1. Number of units to be sold to earn a profit of Rs.120000

= Fixed expenses+ profit/ contribution per unit

= Rs.40 – Rs.25 = Rs.15

= Rs.180000+120000/15= 300000/15= 20000 units

2. Sales to earn a profit of Rs.120000

= Fixed expenses+ profit/ contribution per unit * Selling price per unit

= Rs.180000+120000/15*40= Rs.800000

Problem No.2 Assuming that the cost structure and selling prices remain the same in periods I and II find out

1. P/v Ratio

2. BE Sales

3. Profit when sales are Rs.100000

4. Sales required to earn a profit of Rs.20000

Period	Sales Rs.	Profit Rs.
I	120000	9000
II	140000	13000

1. P/V Ratio = Contribution /sales *100

= 13000-9000/140000-120000*100= 20%

2. **BE Sales**

Contribution- Fixed Cost=24000=15000= Rs.9000

BE Sales= Fixed expenses/ PV Ratio= 15000/20%= Rs.75000

3. Profit when sales Rs.100000

100000=15000+profit/ 20%= Profit= Rs. 5000

4. Sales required to earn a profit of Rs.20000

Sales= 15000+20000/20%= Rs.175000

POSSIBLE QUESTIONS

PART A (1 mark)

(Online Examinations)

PART B (2 Marks)

1. What is Zero – Base Budgeting?
2. Write any four functions of a Budget Controller.
3. Define the term Budget.
4. Define Budgetary Control.
5. Write down the steps in Zero – Base Budgeting.

PART C (6 Marks)

1. From the following data, Calculate Break Even Point expressed in terms of units and also the new B.E.P. if selling price is reduced to 10 %

   Fixed Expenses :

Depreciation	Rs. 1,00,000
Salaries	Rs. 1,00,000

   Variable Expenses :

Materials	Rs. 3 per unit
Labour	Rs. 2 per unit
Selling price	Rs. 10 per unit

2. You are given :
   Margin of Safety Rs. 10,000 which represents 40 % of sales. P.V. ratio 50 %.
   Calculate (a) Sales (b) Break even sales (c) Fixed Cost (d) Profit

3. Explain the Advantages and Limitations of Marginal costing.

4. Vasanth Ltd., presents the following results for one year. Calculate the P/V Ratio, BEP and Margin of Safety.

	Rs.
Sales	2,00,000
Variable costs	1.20,000
Fixed cost	50,000
Net profit	30,000

5. The following data are obtained from the records of a company. You are required to calculate P/V Ratio, Fixed cost and Break-even point

Year	Sales (Rs.)	Profit (Rs.)
I	320000	40000
II	360000	56000

(OR)

6. Assuming that the cost structure and selling prices remain the same in periods I and II find out: 1. P/V Ratio 2. Break even Sales 3. Profit when sales are Rs.1,00,000 4. Sales required to earn a profit of Rs.20,000 5. Margin of safety in II nd period

Period	Sales (Rs.)	Profit (Rs.)
I	120000	9000
II	140000	13000

* * * * *

Karpagam Academy of Higher Education
(Deemed University Established Under Section 3 of UGC Act, 1956)
Coimbatore - 641 021.
Management Accounting (16CCU502A)

UNIT IV

S.NO	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
1	Fixed cost does not change with the n production with a certain range.	Increase	Decrease	Increase or decrease	Both a and b	Increase or decrease
2	______ is one which tends to vary does with the volume of output.	Fixed cost	Variable cost	Total cost	Marginal cost	Variable cost
3	_______ is a technique or working costing, which is used in conjunction with other methods of	Job costing	Standard costing	Marginal costing	Standard costing	Marginal costing
4	______ are kept separate at every stage	Fixed costs	variable costs	Fixed and variable costs	Semi - variable Cost	Fixed and variable costs
5	As fixed costs are _____ costs	Total	Variable	Average	Period	Period
6	Period costs are _____ from product cost or cost of production or cost of sales.	Included	Excluded	Included or excluded	Included and Excluded	Excluded
7	Only ______ are considered as the cost of the product.	Fixed cost	Variable cost	Total cost	Marginal cost	Variable cost
8	Period costs are not carried forward to next years _____	Income	Expenses	Profit	Loss	Income
9	Marginal income or marginal contribution known as the ____	Income or expenses	Income or profit	Income or loss	Expenses or profit	Income or profit

10	The difference between the contribution and fixed costs is the_______	Net profit or loss	Net profit	Gross profit	Net loss	Net profit or loss
11	Fixed costs remain constant _______of level of activity.	Respective	Irrespective	Contribution	Variable	Irrespective
12	Sales price and variation cost per unit remain the ______	same	Different	Equal	Similar	same
13	Cost volume profit relationship is fully employed to reveal the state of ______ at various level of	Assets	Liability	Profitability	Liquidity	Profitability
14	_______ fluctuates from time to time but in the ling run marginal cost are stable.	Fixed cost	Variable cost	Total cost	Fixed Cost	Variable cost
15	_____ remains the same, irrespective of the volume of production.	Total costs	Average costs	Marginal costs	Standard cost	Marginal costs
16	Fixed cost is _______ from product.	Included	Excluded	Both a and b	Included and Excluded	Excluded
17	The management can take decision regarding to _____ and tendering.	Pricing	Planning	co-ordinating	Controlling	Pricing
18	______ expenses remain unchanged at any level of operation	Fixed	Variable	semi- variable	Fixed and Variable	Fixed
19	_____expenses are those expenses which vary according to the units of production.	Fixed	Variable	semi- variable	Fixed and Variable	Variable
20	____expenses are those which are partly constant and partly variable.	Fixed	Variable	semi- variable	Fixed and Variable	semi- variable
21	The difference between sales value and variable cost is known as	Profit	Contribution	BEP	Fixed cost	Contribution
22	Contribution=_______	Sales – variable cost	Sales – fixed cost	Sales + variable cost	Sales + variable cost	Sales – variable cost
23	Marginal cost is also known as ______	Period cost	Fixed cost	Volume cost	Prime cost	Volume cost

24	Fixed cost is also known as ______	Period cost	Fixed cost	Volume cost	Prime cost	Period cost
25	______ indicates the relation ship of contribution to sales	p/v ratio	Contribution	Profit	Sales.	p/v ratio
26	P/v ratio can be improved by _______	Increase sales once	Decreasing selling price	Increasing the variable cost	Increasing the value of sale	Increase sales once
27	______= sales X p/v ratio.	Sales	Profit	Contribution	Fixed cost	Contribution
28	Contribution minus profit is equal to________	Sales	Loss	Variable	Fixed cost	Fixed cost
29	p/v ratio=______	Profit volume ratio	Profit variable ratio	Production volume ratio	price volume ratio	Profit volume ratio
30	Limiting factor is also known as ____________	Key factor	Production factors	price factor	decision factor	Key factor
31	The criteria to select a suitable limited factor is ___________	Highest contribution per	Highest profit	Highest reduction	lowest reduction	Highest contribution per
32	_____ is the point at which sales revenue is equal to total cost.	Margin of safety	Break even	Fixed cost	BEP	Break even
33	Break even point in unit can be ascertaining by dividing the break even sales value by _______	Profit	p/v ratio	Selling price	Marginal cost	Selling price
34	Increase in fixed cost =_______	No effect in bep	Higher BEP	No effect in p/v ratio	Lower profit	No effect in p/v ratio
35	Decrease in sales volume = ________	No effect in BEP	Higher BEP	No effect in p/v ratio	Lower profit	Lower profit
36	Increase in variable cost = ________	No effect in bep	Higher BEP	No effect in p/v ratio	Lower profit	No effect in p/v ratio
37	Decrease in selling price = _________	No effect in BEP	Higher BEP	No effect in p/v ratio	Lower profit	Higher BEP

38	Decrease in sales volume = _________	No effect in BEP	Higher BEP	No effect in p/v ratio	Lower profit	No effect in BEP
39	Is the angle at which sales line cuts the total cost line	BEP	Angle of incidence	Contribution	Variable cost	Angle of incidence
40	If the angle of incidence is _________ at indicates that the profits are being made at higher rate	Large	Small	Neither large nor small	Medium	Large
41	_________ is the difference between the total sales revenue and the sales at breakeven point.	Actual sales	margin of safety	Reducing the fixed costs	all the above	margin of safety
42	Margin of safety can be improved by ________	Increasing the volume of sales	Decreasing the selling price	Reducing he fixed costs	All the above	Reducing he fixed costs
43	_______ margin safety indicates a favorable position of the business.	Large	Neither large nor small	Small	Medium	Large
44	Cost volume profit analysis may be applied for ______	Profit planning	Cost control	Decision making	All of these	All of these
45	Marginal cost is the sum of prime cost plus	Fixed cost	Variable cost	Variable overhead	Total cost	Variable overhead
46	At BEP contribution is equal to ________	Profit	Variable	Fixed cost	Sales	Fixed cost
47	At BEP, profit will be ________	High	Low	Zero	Medium	Zero
48	Total fixed cost of a company is Rs 21,000 per share ; variable cost per unit is Rs.7 and its selling	3000	2100	7000	10,000	7000
49	p/v ratio of company a is 40% and company B is 50% state which company is likely to earn greater	Company A	Company B	Can be determined	Company C	Company B
50	Margin of safety ratio=_____	Margin of safety/ actual	Margin of safety X actual sales	Margin of safety	Marginn of Safety Y	Margin of safety
51	What will be the selling price per unit, when variable cost per unit Rs.5.60 p/v ratio 60%?	6	8	14	10	14

52	Changes in profit between the two period Rs.10,000 changes in sales for the above periods	25%	40%	10%	50%	25%
53	________ is the difference between the sales and marginal cost.	Fixed cost	Contribution	Profit	Sales	Contribution
54	p/v ratio shows the relationship between.	Contribution and sales	Profit and sales	Profit and contribution	Contribution	Contribution and sales
55	Sales Rs. 5,00,000 ; fixed cost Rs.1,50,000; profit Rs.1,00,000 p/v ratio is equal to _______	25%	75%	50%	80%	50%
56	Sales Rs. 1, 00,000; variable cost Rs.60, 000 p/v ratio is equal to ______	40%	75%	10%	100%	40%
57	Sales rs. 1, 00,000 break even sales Rs.40,000 margin of safety is equal to	60,000	40,000	1, 00,000	75,000	40,000
58	Sales are Rs.40, 000; variable cost Rs. 30,000 and fixed cost Rs. 15,000 here there will be ____	Profit of Rs 500	Loss of Rs. 5,000	Contribution of Rs 25,000	Profit of Rs 25,000	Loss of Rs. 5,000
59	If fixed cost is Rs 20,000 p/v ratio is 40% the BEP will be__	20,000	50,000	8,000	10,000	50,000
60	When fixed cost is Rs 10,000 and p/v ratio is 50% the break even point will be	20,000	40,000	50,000	90,000	20,000

UNIT-V

SYLLABUS

Budgetary Control - Budgeting and Budgetary Control: Concept of budget, budgeting and budgetary control, objectives, merits, and limitations. Budget administration. Functional budgets. Fixed and flexible budgets. Zero base budgeting. Programme and performance budgeting.

DEFINITION

A Budget is a plan that outlines an organization's financial and operational goals. So a budget may be thought of as an action plan; planning a budget helps a business allocate resources, evaluate performance, and formulate plans. While planning a budget can occur at any time, for many businesses, planning a budget is an annual task, where the past year's budget is reviewed and budget projections are made for the next three or even five years.

The Institute of Cost and Management Accountants, London, gives the following definitions:

A budget is “a financial and / or quantitative statement, prepared and approved prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective. It may include income, expenditure and the employment of capital.

BUDGETARY CONTROL

Budgetary control is the process of determining various budgeted figures for the enterprise for the future period and then comparing the budgeted figures with the actual performance for calculating variances, if any. First of all budgets are prepared and the actual results are recorded. The comparison of budgeted and actual figures will enable the management to find out description and take remedial measures at a proper time. The budgetary control is a continuous process, which helps in planning and co ordination.

Budgetary Control. “The establishment of departmental budgets relating the responsibilities of executive to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure by individual action the objectives of the policy, or to provide a firm basis for its revision.”

Thus, a budget is a predetermined statement of management policy during a given period which provides a standard for comparison with the results actually achieved. Budgetary control is a system of controlling costs which includes the preparation of budgets, coordinating the departments and establishing responsibilities, comparing actual performance with that of budgeted and acting upon results to achieve maximum profitability. Budgeting is essentially concerned with planning, and can be broadly illustrated by comparison with the routine a ship's captain follows on each voyage.

Budget, Budgeting and Budgetary Control

A budget is a blue print of a plan expressed in quantitative--terms. Budgeting is a technique for formulating budgets. Budgetary control, on the other hand, refers to the principles, procedures and practices of achieving given objectives through budgets

Objectives of budgeting

1. To define the goal of the enterprises
2. To provide long and short period for attaining these goals
3. To co-ordinate the activities of different department.

OBJECTIVES OF A BUDGETARY CONTROL

1. Definition of Goals: Portraying with precision, the overall aims of the business and determining targets of performance for each section or department of the business.
2. Defining Responsibilities: Laying down the responsibilities of each individual so that everyone knows what is expected of him and how he will be judged.
3. Basis for Performance Evaluation: Providing basis for the comparison of actual performance with the predetermined targets and investigation of deviation, if any, of actual performance and expenses from the budgeted figures. It helps to take timely corrective measures.
4. Optimum use of Resources: Ensuring the best use of all available resources to maximize profit or production, subject to the limiting factors.
5. Coordination:

Coordinating the various activities of the business and centralizing control, but also making a facility for the Management to decentralize responsibility and delegate authority.

Planned action: Engendering a spirit of careful forethought, assessment of what is possible and an attempt at it. It leads to dynamism without recklessness. It also helps to draw up long range plans with a fair measure of accuracy.

6. Basis for policy: Providing a basis for revision of current and future policies.

Importance of Budgetary Control

1. To Use the Forecasting Techniques

It is the importance of budgetary control that with this, we can use the forecasting techniques. Three departments work hard for calculating best estimation of future. Accounting department provides old data. Statistical department provides the tools and techniques of forecasting like probability, time series other sampling methods. Management department uses both department services to estimate the expenditures and revenue of business under the normal conditions of business. So, no department say anything wrong in making of budget. So, it is necessary for business to use budgetary control techniques.

2. Fix the Responsibility of Departments

Department's scientific name is cost center. Manager makes budget and show the target of company and employees are given the powers to perform these targets. After checking the variance in budget through budgetary control process, manager can fix the responsibility of each department and its employees in a particular cost center.

3. Effective Utilization of Company's resources

Company can only effective use its resources, if someone stops misuse of money and fund of company. If budgetary control is used in company, at that time, no action will be taken before making budget. Responsible personal of company will be accountable for his action. Suppose, company has fixed the target of company's annual Sale is $ 40,00,000 after participating sales manager in the setting of this sale budget. Now, after one year, if sale is just $ 1,00,000. This sale manager must say what is the reason for not selling the product up to standard level of sale.

4. Excel Ourself

After using budgetary control techniques in our business, we will definitely learn the skills of excel ourself because we all know that a budget is based on estimates, it may or may not be true. But continually practise of making good budget and apply in organisation, manager can learn skills and experience for increasing the efficiency in every work of company. Meaning of this, manager will get positive approach through budgetary control.

STEPS IN BUDGETARY CONTROL

1. Organization chart
2. Budget Centre
3. Budget Committee
4. Budget Manual
5. Budget period
6. Key Factor

The management is efficient if it is able to accomplish the objective of the enterprise. It is efficient when it accomplishes the objectives with minimum effort and cost. In order to attain long-range efficiency and effectiveness, management must chart out its course in advance.

A systematic approach to facilitate effective management performances profit-planning and control, or budgeting. Budgeting is therefore an integral part of management. In a way, a budgetary control system has been described as a historical combination of a "goal – setting machine for increasing an enterprise's profits, and a goal-achieving machine for facilitating organizational coordination and planning while achieving the budgeted targets."

Objectives of Budgetary Control

Briefly, the main objectives of budgetary control are:

1. To combine the ideas of all levels of management in the preparation of the budget.
2. To coordinate all the activities of the business.
3. To centralize control.
4. To decentralize responsibility to each manager involved.
5. To act as a guide for management decision-making when unforeseeable conditions affect the business.
6. To plan and control income and expenditure so that maximum profitability is achieved.
7. To direct capital expenditure in the most profitable direction.

8. To ensure that sufficient working capital is available for the efficient operation of the business.
9. To provide a yardstick against which results can be compared.
10. To show management where action is needed to remedy a situation.

Basic Conditions for the Successful Operation of Budgetary Control

1. Realistic Budget: The quality of the budget is very important for the successful operation of budgetary control. If should be realistic and operationally feasible. Flexible budget is normally a good budget as it take into consideration the dynamics of the business. It must be based on what is attainable, must suit the organizational facilities and complexities and must be flexible to accommodate the changing environment of the business.
2. Qualitative and Timely Reporting : Variances must be analyzed, interpreted and reported in a manner which is easily understandable. Reporting must be on time and bring out significant areas/points and be precise, simple and meaningful. Time is the essence of reporting and maintenance of time schedule enhances the value of reporting and leads to correction of many adverse events/trends which otherwise would have taken a heavy toll.
3. Management's Attitude: The management must have a positive attitude towards budgetary control. Any scheme of control is a discipline and regulation. Management must have faith and confidence in the scheme. Management must take keen interest in the scheme of budgetary control and render whole-hearted support and cooperation in making this a success.

ADVANTAGES OF BUDGETARY CONTROL

The following are some of the most significant advantages of budgeting :

1. Budgeting compels management to plan for the future. The budgeting process forces management to look ahead and become more effective and efficient in administering business operations. It instills into managers the habit of evaluating carefully their problems and related variables before making any decisions.
2. Budgeting helps to coordinate, integrate, and balance the efforts of various departments in the light of the overall objectives of the enterprise. This results in goal congruency and harmony among the departments.

3. Budgeting facilitates control by providing definite expectations in the planning phase that can be used as a frame of reference for judging the subsequent performance. Undoubtedly, budgeted performance is a more relevant standard for comparison than past performance is based on historical factors which are constantly changing.
4. Budgeting improves the quality of communication. The enterprise's objectives, budgets goals, plans, authority and responsibility and procedures to implement plans are clearly written and communicated through budgets to all individuals in the enterprise. This results in better understanding and harmonious relating among mangers and subordinates.
5. Budgeting helps to optimize the use of the firm's resources, both capital and human. It aids in directing the total efforts of the firm into the most profitable channels.
6. Budgeting increase the morale and thereby the productivity of the employees by seeking their meaningful participation in the formulation of plans and policies, bringing about a harmony between individual goals and the enterprise's objectives, and by providing incentives for better performance.
7. Budgeting develops profit-mindedness and cost consciousness.
8. Budgeting permits the management to focus attention on significant matters through budgetary reports. Thus, it facilitates management by exception and thereby saves the management's time and energy.
9. Budgeting measure efficiency and thereby enables self-evaluation by the management, it also indicates the progress made in attaining the enterprise's objectives.

PROBLEMS OF THE BUDGETING SYSTEM

The major problems in developing a budgeting system are:

1. Getting the support and involvement of all levels of management.
2. Developing meaningful forecasts and plans, especially the sales plan.
3. Inducing all individuals to get involved in the budgeting process, and gaining their full participation.
4. Establishing realistic objectives, procedures and standards of desired performance.
5. Applying the budgeting systems in a flexible manner.
6. Maintaining effective follow-up procedures, and adapting the budgeting system to changing circumstances.

LIMITATIONS OF BUDGETARY CONTROL

Management must consider the following limitations in using the budgeting system as a device to solve managerial problems:

1. Budgeting is not an exact science, its success depends upon the precision of estimates. Estimates are based on facts and managerial judgement. Managerial judgement can suffer from subjectivity and personal biases. The efficacy of budgeting thus depends upon the quality of managerial judgement.
2. A perfect system of budging cannot be organized in a short period. Business conditions change rapidly. Therefore, the budging system should be continuously adapted to changing circumstance. Budgeting has to be a continuous exercise, it is a dynamic process. Management should not lose patience, it should go on trying various techniques and procedures in developing and using the budgeting system.
3. A skillfully prepared budget system will not by itself improve the management of an enterprise unless it is properly implemented. For the success of the budgetary system, it is essential that it is understood by all, and that the managers and subordinates put in concerted effort for accomplishing the budget goals. All persons in the enterprise must be fully involved in the preparation and execution of budgets, otherwise budgeting will not be effective.
4. Budgeting is a management tool, a way of managing, not the management itself. The presence of a budgetary system should not make management complacent. To get the best results, management should use budgeting with intelligence and foresight, along with other managerial techniques. Budgeting assets management, it cannot replace management.
5. Budgeting will be ineffective and expensive if it is unnecessarily detailed and complicated. A budget should be precise in format and simple to understand, it should be flexible in application.
6. Budgeting will hide inefficiencies instead of revealing them if there is not evaluation system. There should be continuous evaluation of the actual performance. The standards should also be re-examined regularly.

BUDGET PERIOD

There is no "right" period for any budget. Budget periods may be short term and long term. If a business experiences seasonal fluctuations, the budget period will probably extend over one seasonal cycle. If this cycle covers, say two or three years, the long-term budget would cover the period, while the short-term budgets would perhaps be preparation on a monthly basis for control purpose. Short-term budgeting is usually costly to prepare and operate, while long-term budgeting may be considerably affected by unforeseen conditions. Budget periods frequently used in industry vary between one month and one year, the latter probably being the most commonly used as it fits in with the normally accepted accounting period. However, forecasts of much longer periods than a year may be used in the case of capital expenditure budgets, for example, which must be planned well in advance. A common practice in industry is to have a series of budget periods. Thus, the sales budget may cover the next five years, while production and cost budgets may cover only one year. These yearly budgets will be broken down into quarterly or even monthly periods. Where long-term budgets are operated it is usual to supplement them with short-term ones.

THE KEY FACTOR

This is the factor whose influence must first be assessed in order to ensure that functional budgets are reasonably capable of fulfillment. The key factor-known variously as the "limiting" or "governing" or "principle budget" factor is of vital importance. It may not be the same for each budget period, as the circumstances may change.

It determines priorities in functional budget. Among the many key factors which may affect budgeting are the following:

1. Management
2. Lack of capital, restricting policy
3. Lack of knowhow
4. Inefficient executives
5. Insufficient research into product design and methods.

CLASSIFICATION OF BUDGETS

Though budgets can be classified according to various points of view the following bases of classification are generally in vogue:

1) Classification according to time factor

Functional classification

2) Classification according to flexibility factor.

1) Classification according to time factor.

Long-term Budgets (2) Short-term Budgets (3) Current Budgets: They cover a period of a month or so and as shot-term budgets, they get adjusted to prevailing circumstances. Sometimes, within the framework of a short-term budget, there are quarterly plans which are prepared by recasting the budget for a still shorter period on the basis of the performance of the immediate past. In a way, these quarterly budgets are meant to be an elaboration of the annual budget.

Functional Classification

Sales Budget, (2) Production Budget, (3) Personnel Budget (4) Purchase Budget : Correlated with sales forecast and production planning, it deals with purchases that are required for planned production. purchase would include both direct and indirect materials and goods. (5) Research Budget (6) Cash Budget (7) Capital Budget (8) Master Budget (9) Plant utilization Budget (10) Office and Administration Budget. This budget represents cost of all administrative expenses, such as managing director's salary, staff salaries and expenses of office management like lighting and cleaning.

2) Classification According to Flexibility

Fixed Budget: This is budget in which targets are rigidly fixed. Such budgets are usually prepared from one to three months in advance of the fiscal year to which they are applicable. Thus, twelve months or more may elapse before figures forecast for the December budget Are used to measure actual performance. Many things may happen during this intervening period and they mayh make the figures go widely out of the line with the actual figures. Thought it is true that a fixed, or static budget as it is sometimes called, can be revised whenever the necessity arises, it smacks of rigidity and artificially so far as control over costs and expenses are concerned. Such budgets are preferred only where sales can be forecast with the greatest of accuracy which means, in turn, that the cost and expenses in relation to sales can be quite accurately ascertained.

FLEXIBLE BUDGET

A flexible budget is a budget that adjusts or flexes for changes in the volume of activity. The flexible budget is more sophisticated and useful than a static budget, which remains at one amount regardless of the volume of activity.

SALES BUDGET

This is a forecast of total sales expressed and incorporated in quantities and / or money. A sales budget may be prepared by expressing turnover under any one or combination of the following:

1. Product or product group;
2. Territories, areas and countries;
3. Types of customers, e.g., National, Government, export, home, wholesales, or retails;
4. Salesman, agents or representatives, and
5. Period; such as quarters, months, weeks, etc.

A sales budget may be prepared with the help of any one or more of the following methods. Analysis of past sales: Analysis of past sales for a number of years, say 5 to 10 years, viz. long-term trend, seasonal trend, cyclical trend, sundry other factors. The long-term trend represents the movement of the fortunes of a business over many years. The seasonal trend may affect many types of business and hence this factor must be taken into account when studying figures for consecutive months over a number of years. The cyclical trend represents the fluctuations in the business activity due to the effect of the trade cycle. In order to study the cyclical trend it is desirable to disregard the effects to the long-term and seasonal trends. Sundry factors include, such as a strike in the industry or a serious fire or flood. From such analysis it will be possible to suggest future trends. In analyzing such sales, considerable help can be obtained from statistical reports produced by the trade units and commercial intelligence units, government publications, etc.

Studying the impact of factors affecting sale: Any change in the company policy or method should always be considered. For example, introduction of special discounts special salesmen, a new design of the product, new or additional advertising campaigns, improved deliveries, after-sales service should have some market effect on a sales budget. While preparing such forecasts, the sales manager must consider the opinion of divisional managers and other sales staff, the budget officer and the accountant. It will be observed that the preparation of a sales budget involves many factors and calls for a high degree of knowledge of conditions, and if ability to deduce fro the known facts and various estimates the probable course of sales budget is prepared first. If production is the key factor, the production budget should be built up first and the sales budget must be drawn up within up within the limits imposed by the production budget.

Illustration 1

AB Co. Ltd. manufactures two products, A and B, and sells them through two divisions – North and South. For the purpose of submission of sales budget to the budget committee, the following information has been made available.

Product	North	South
A	4,000 at Rs. 9	6,000 at Rs. 9
B	3,000 at Rs. 21	45,000 at Rs. 21

Actual sales of the current year were:

Product	North	South
A	5,000 at Rs. 9	6,000 at Rs. 9
B	2,000 at Rs. 21	4,000 at Rs. 21

Market studies reveal that the product A, is popular but under-period. It is observed that if the price of A is increased by Re. 1 it will still find a ready market. On the other hand, B is over-period to customers and the market could absorb more if the sales price of B is reduce by Re. 1. The management has agreed to give effect to the above price changes.

From the information relating to these price changes and reports from salesman, the following estimates have been prepared by divisional managers. Percentage increase in sales over current budget is:

Product	North	South
A	+10%	+5%
B	+20%	+10%

Additional sales above the estimated sales of divisional managers are:

Product	North	South
A	600 units	700 units'
B	400 units	500 units

Prepare a Sales Budget

Solution

Sales Budget

A B Co. Ltd.

For the Year : 19 x 7

Prepared by ....

Checked by ....

Submitted on ....

Division	Product		Budget for Future Period Unit Price Value				Budget for Current Period Unit Price Value		Actual sales for Current Period Unit Price Value	
		Qty	Rs	Rs.	Qty	Rs	Rs.	Qty	Rs	Rs.
North	A	5,000	10	50,000	4,000	9	36,000	5,000	9	45,000
	B	4,000	20	80,000	3,000	21	63,000	2,000	21	42,000
Total		9,000		1,30,000	7,000		99,000	7,000		87,000
South	A	7,000	10	70,000	6,000	9	54,000	7,000	9	63,000
	B	6,000	20	1,20,000	5,000	21	1,05,000	4,000	21	84,000
Total		13,000		1,90,000	11,000		1,59,000	11,000		1,47,000
Total	A	12,000	10	1,20,000	10,000	9	90,000	12,000	9	1,08,000
(Summary)	B	10,000	20	2,00,000	8,000	21	1,68,000	6,000	21	1,26,000
Total		22,000		3,20,000	18,000		2,58,000	18,000		2,34,000

PRODUCTION BUDGET

Like the sales budget, the production budget is built up in terms of quantities and money. The quantities are entered at the beginning and, when the remainder of the budget have been built up and the cost of production calculated, the costs are entered to compile a production cost budget. In preparing the production budget, consideration should be given to the following:

Principal budget factor, e.g., if sales be the budget factor then it should be the sales budget; otherwise other budgets. Production planning and determination of optimum factory capacity. The opening stocks, and stocks required to be carried at the end of the period. The policy of the management regarding manufacture or purchase of components.

The production budget may be classified under the following heads:

1. Products
2. Manufacturing department
3. Months, quarters, etc.

ABC Col. Ltd.

(Production Budget (in units)

Items	A	B	For the year..... Remarks
Sales during the period		12,000	10,000
Required stock on 31st Dec.		1,000	2,000
Total		13,000	12,000
Less Estimated Opening stock		1,000	1,000
Estimated production		12,000	11,000

Purchase Budget

A purchase Budget gives the details of the purchase which must be made to meet the needs of the business. It includes all items of purchase. Such as raw materials, indirect materials and other equipments. The purchase budget for raw materials is the most important and the following factors are required to be considered in preparing this budget.

Opening and closing stocks. Unfulfilled orders at the beginning of the budget period.

Storage space, economic buying quantity, and financial resources. The prices to be paid.

ILLUSTRATION 5

The following information regarding the stocks of materials required for the production programme of Ramesh Limited is available.

Materials	Estimated Consumption during 1983-84 (in kg)	**Estimated Stocks (in kg)**	
		On 01.07.1983	**On 30th June 1984**
AB	9,03,000	20,000	17,000
GH	6,90,000	10,000	20,000
XY	5,47,000	30,000	33,000

Collating the details given above with the information contained in the Materials Budget, prepare the Purchase Budget of Ramesh Limited.

Solution

Ramesh Limited

Purchase Budget

(1983-84)

Particulars	AB	GH	XY
	Kg.	Kg.	Kg.
Estimate Consumption	9,03,000	6,90,000	5,47,000
Add: Stock required on 30-06-84	17,000	20,000	33,000
Total requirements	9,20,000	7,10,000	5,80,000
Less: Estimated stock on 1st July 1983	20,000	10,000	30,000
Quantity to be purchased	9,00,000	7,00,000	5,50,000
Price per kg (Estimate	Re. 1	50 p	40 p
Estimated cost of purchase			
of materials (Rs)	9,00,000	3,50,000	2,20,000

PREPARATION OF CASH BUDGET

A complete system of budgetary control makes the construction of cash budget easy. It is one of the functional budgets which is prepared along with other budgets. There are three recognized methods of preparing a cash budget.

1. The Receipts and Payment Method;

2. The Adjusted Profit and Loss Method; and
3. The Balance Sheet Method.

Steps to be adopted

Cash Receipts Forecast; Cash receipts from sales, debtors, income from sales of assets and investments and probable borrowings should be forecast and brought into cash budget. Any lag in payment by debtors or by others shall be considered for ascertaining further cash inflows.

Cash requirements forecast: Total cash outflows are taken out from operating budgets for the elements of cost, and from capital expenditure budget for the purchase of fixed assets. Adjustments are to be made for any lag in payments.

Care must be taken to ensure that outstanding or accruals are excluded from the cash budget since this method is based on the concept of actual cash flows.

Illustration 6

A newly started company Quick Co. Ltd., wishes to prepare cash budget from January. Prepare a cash budget for the first six months from the following estimated revenue and expenditure.

Month	Total Sales	Material	Wages	Production Overheads	Selling and distribution Overheads
	Rs.	Rs.	Rs.	Rs.	Rs.,
Jan.	20,000	20,000	4,000	3,200	800
Feb.	22,000	14,000	4,400	3,300	900
Mar.	24,000	14,000	4,600	3,300	800
Apr.	26,000	12,000	4,600	3,400	900
May.	28,000	12,000	4,800	3,500	900
June	30,000	16,000	4,800	3,600	1,000

Cash balance on 1st January was Rs. 10,000. A new machine is to be installed at Rs. 30,000 on credit, to be repaid by two equal installments in March and April.

Sales commission @ 5% on total sales is to be paid within the month following actual sales. Rs. 10,000 being the amount of 2nd call may be received in March. Share premium amounting to Rs. 2,000 is also obtainable with 2nd call.

Period of credit allowed to suppliers 2 months

Period of credit allowed to customers 1 month

Delay in payment of overheads 1 month

Delay in payment of wages ½ month

Assume cash sales to be 50% of total sales.

Quick Co. Limited

Cash Budget

For the period January to June 1984

Details	Jan.	Feb.	Mar.	Apr.	May.	June
	Rs.	Rs.	Rs,	Rs,	Rs,	Rs.
A Balance b/d	10,000	18,000	29,000	20,000	6,100	8,800
B Receipts: Cash Sales (50%)	10,000	11,000	12,000	13,000	14,000	15,000
Debtors	-	10,000	11,000	12,000	13,000	14,000
Capital	-	-	10,000	-	-	-
Share premium	-	-	2,000	-	-	-
(A + B) Total	20,000	39,000	64,800	45,000	33,100	37,800
C Payments Material	-	-	20,000	14,000	14,000	12,000
Wages	2,000	4,200	4,500	4,600	4,700	4,800
Production Overheads	-	800	900	800	900	900
Commission	-	1,000	1,100	1,200	1,300	1,400
Machinery	-	-	15,000	15,000	-	-
(C) Total	2,000	9,200	44,800	38,900	24,300	22,600
Balance						
(A+B+C)	18,000	29,800	20,000	6,100	8,800	15,200

FLEXIBLE BUDGETS

In those industries where the pattern of demand is stable, a fixed budget may be adequate, especially where the budget period is comparatively short. In such businesses it is possible to forecast sales with a considerable degree of accuracy. There are many undertakings where stable conditions are absent. In such concerns fluctuations in output might lead to violent deviations from the budget. In such concerns it is usual to adopt the flexible budgetary technique. A flexible budget is a budget which is designed to change in accordance with the level of activity actually attained. If flexible.

The owner of a car knows that the more he uses it per year the more it costs him to operate it. He also knows that the more he uses his car the less its costs per running metres. The reason for this lies in the nature of the expenses, some of which are fixed while others are variable or semi variable. Insurance, taxes, registration, and garaging are fixed costs; they remain the same whether the car is operated 1,000 or 2,000 kilometers. The costs of tyres, petrol oil, and repair are variable costs and depend largely upon the kilometers driven. Obsolescence and depreciation result in a combined type of cost that, although fluctuating to some degree upon the usage of the car, is semi-variable for it does not vary directly with the usage. The cost of operating the car per kilometer depends on the number of kilometers the car is used. The mileage constitutes the basis for judging the activity of the automobile. If the owners prepares an estimate of total cross and compares his actual expanses with the budget in keeping his expenses within the allowed limits, unless he takes the mileage factor into account.

Originally, the flexible budget idea was applied principally to the control of departmental factory overhead. In recent years, however, the idea has been applied to the entire budget so that production budgets as well as selling and administrative budgets are prepared on a flexible basis. The construction of a flexible budget is identical with that of a fixed budget, except that a budget is calculated for each volume ranging from a possible 60 per cent to 100 per cent of capacity. When actual figures are available estimate previously determined for the level attained are compared with actual results, and the differences are noted. This end-of period comparison is used to measure the performance of each department head. It is this readymade method of comparison that makes the flexible budget a valuable instrument for cost control. The flexible budget assists in evaluating the effects of varying volumes of activity on profits and on cash position.

Illustration 9

The following data are available in a manufacturing company for the half-year period ending 30th June, 1984.

Fixed expenses:	Rs. (Lakhs)	
Wages and salaries	8.4	
Rent, rates, and taxes	5.6	
Depreciation	7.0	
Sundry administrative expenses	8.9	
		29.9

Semi-variable expenses @ 50% of capacity -		
Maintenance and repairs	2.5	
Indirect labour	9.9	
Sales department salaries etc.,	2.9	
Sundry administrative expenses	2.6	
		17.9
Variable expenses: @ 50% of capacity -		
Material	24.0	
Labour	25.6	
Other expenses	3.8	
		53.4

It is assumed that fixed expenses remain constant for all levels of production' semi-variable expenses remain constant between 45% and 65% of capacity, increasing by 10% between 65% and 80% of capacity and 20% between 89% and 100% of capacity.

Sales at the various levels are:

60% capacity	Rs. 100.00 lakhs
75% Capacity	120.00 Lakhs
90% Capacity	150.00 Lakhs
100% Capacity	170.00 Lakhs

Prepare a flexible budget for the half-year and forecast the profits at 60%, 75%, 90% of capacity.

Solution

Flexible Budget for the Half-Year Ending 30th June 1984

(showing the forecast of profit of different levels)

	Operating capacity				
Elements of cost	50%	60%	75%	90%	100% Standard
A Fixed expenses:					
Wages and salaries	8.4	8.4	8.4	8.4	8.4
Rent, rates and taxes	5.6	5.6	5.6	5.6	5.6
Depreciation	7.0	7.0	7.0	7.0	7.0
Sundry expenses	8.9	8.9	8.9	8.9	8.9
	29.9	29.9	29.9	29.9	29.9

B. Semi-variable exp:					
Maintenance and repairs	2.5	2.5	2.75	3.00	3.00
Indirect labour	9.9	9.9	10.89	11.88	11.88
Sales Dept. salaries	2.9	2.9	3.19	3.48	3.48
Sundry Adm. expenses	2.6	2.6	2.86	3.12	3.12
	17.9	17.9	19.69	21.48	21.48
C. Variable expenses:					
Material	24.0	28.80	36.00	43.20	48.0
Labour	25.6	30.72	30.47	46.08	51.2
Other expenses	3.8	4.56	5.70	6.84	7.6
	53.4	64.08	80.17	96.12	106.8
Total cost of Production	101.2	111.88	129.76	147.50	158.18
(i.e. Total of A, B and C) Profit (+) of Loss (-)		-11.88	-9.76	+2.50	+11.82
Sales		100.00	120.00	150.00	170.00
Less: Bills Payable	=	10,000			
Sundry Creditors	=	Rs. 1,91,667			

HUMAN FACTORS IN BUDGETING

If a budget program is to be successful, it must have the complete acceptance and support of the persons who occupy key management positions.

ZERO BASED BUDGETING (ZBB)

Zero based budgeting (ZBB) is an alternative approach that is sometimes used particularly in government and not for profit sectors of the economy.

Preparation of Different Budget

A standing budget committee will usually be responsible for overall policy matters relating to the budget program and for coordinating the preparation of the budget itself.

MASTER BUDGET

The master budget is a summary of company's plans that sets specific targets for sales, production, distribution and financing activities. It generally culminates in a cash budget, a budgeted income statement, and a budgeted balance sheet.

SALES BUDGET

A sales budget is a detailed schedule showing the expected sales for the budget period; typically, it is expressed in both dollars and units of production. An accurate sales budget is the key to the entire budgeting in some way. If the sales budget is sloppily done then the rest of the budgeting process is largely a waste of time.

PRODUCTION BUDGET

The production budget is prepared after the sales budget. The production budget lists the number of units that must be produced during each budget period to meet sales needs and to provide for the desired ending inventory.

Inventory Purchases Budget for a Merchandising Firm

Manufacturing firms prepare production budget but merchandising firms prepare merchandising purchase budget instead. Merchandising purchase budget shows the amount of goods to be purchased from its suppliers during the period.

MATERIAL BUDGETING | DIRECT MATERIALS BUDGET

Direct materials budget is prepared after computing production requirements by preparing a production budget. Direct materials budget or materials budgeting details the raw materials that must be purchased to fulfill the production requirements and to provide for adequate inventories.

LABOUR BUDGET

The direct labor budget is developed from the production budget. Direct labor requirements must be computed so that the company will know whether sufficient labor time is available to meet the budgeted production needs.

MANUFACTURING OVERHEAD BUDGET

The manufacturing overhead budget provides a schedule for all costs of production other than direct materials and direct labor.

ENDING FINISHED GOODS INVENTORY BUDGET

After preparing sales budget, production budget, direct materials budget, direct labor budget, and manufacturing overhead budget the management has all the data needed to calculate unit product cost. This calculation is needed for two reasons: first, to determine cost of goods sold on the budgeted income statement; and second, to know what amount to put on the balance sheet inventory account for unsold units. The carrying cost of unsold units is calculated on the ending inventory finished goods budget.

SELLING AND ADMINISTRATIVE EXPENSE BUDGET

Selling and administrative expense budget lists the budgeted expenses for areas other than manufacturing.

CASH BUDGET

Cash budget is a detailed plan showing how cash resources will be acquired and used over some specific time period.

BUDGETED INCOME STATEMENT

The budgeted income statement is one of the key schedules in the budget process. It shows the company's planned profit for the upcoming budget period, and it stands as a benchmark against which subsequent company performance can be measured.

BUDGETED BALANCE SHEET

The budgeted balance sheet is developed by beginning with the current balance sheet and adjusting it for the data contained in other budgets.

International Aspects of Budgeting

A multinational company faces special problems when preparing a budget. The problems arise because of fluctuations in foreign currency exchange rates, the high inflation rates found in some countries, and local economic conditions and governmental policies that affect everything from labor costs to marketing practices.

STEPS INVOLVED IN THE BUDGETARY CONTROL TECHNIQUES:

1. State the objectives clearly.
2. Formulating the necessary plans to ensure that the desired objectives are achieved.
3. Translating the plans into budgets.

4. Relating the responsibilities of executives to the budgets.
5. Continuous comparison of the actual results with that of the budget & the ascertainment of deviations (Positive/negative).
6. Investigating into the deviations & establishing the causes.
7. Presentation of information to the management relating the variances to individual responsibilities.
8. Corrective action of the management to present recurrence of variance

* * * * *

POSSIBLE QUESTIONS

PART A (1 mark)

(Online examinations)

PART B (2 Marks)

1. What is Zero – Base Budgeting?
2. Write any four functions of a Budget Controller.
3. Define the term Budget.
4. Define Budgetary Control.
5. Write down the steps in Zero – Base Budgeting.
6. What is Performance Budgeting?
7. Define Budgeting
8. What is Budgetary Control?
9. What is Budget Centre?
10. What is Short-term Budget?
11. Describe on Production Budget.

PART C (6 Marks)

1 Draw up a flexible budget for overhead expenses on the basis of the following data and determine the overhead rates at 70%, 80% and 90% plant capacity.

Particulars	At 70% Capacity Rs.	At 80% Capacity Rs.	At 90% Capacity Rs.
Variable Overheads:			
Indirect labour	-	12,000	-
Store including spares	-	4,000	-
Semi-Variable Overheads:			
Power			
(30% fixed, 70% variable)	-	20,000	-
Repairs and maintenance (60%	-	2,000	-
fixed, 40% variable)			
Fixed Overheads:			
Depreciation	-	11,000	-
Insurance	-	3,000	-
Salaries	-	10,000	-
Total Overheads	-	62,000	-
Estimated direct labour hours:		1,24,00 hrs.	

2. From the particular given below Prepare Cash Budget for the month of June 2010

(a) Expected Sales: April 2010 Rs.2,00,000; May Rs.2,20,000; June Rs.1,90,000. Credit allowed to customer is two months and 50% of the sales of every month is on cash basis

(b) Estimated Purchase: May2010 Rs.1,20,000 June Rs.1,10,000. 40% of the purchase of every months is on cash basis and the balance is payable next month.

(c) Rs.2,000 is payable as rent every month.

(d) Time lag in payment of overhead is ½ month, Overhead May Rs.12,000; June Rs.11,000;

(e) Depreciation for the year is Rs.12,000

(f) Interest receivable on investment during June and December Rs.3000 each

(g) Tax payable during April 2010 Rs.10,000

(h) Estimated cash balance as on 01-06-2010 is Rs.42,500

3. The expenses of budgeted production of 10,000 units in a factory are furnished below:

	Per Unit (Rs.)
Materials	70
Labour	25
Variable Overhead	20
Fixed Overhead (Rs. 1,00,000)	10
Variable Expenses (Direct)	5
Selling Expenses (10% Fixed)	13
Distribution Expenses (20% Fixed)	7
Administration Expenses (Rs. 50,000)	5
Total Cost per unit (to make and sell)	155

Prepare a budget for production of:
(a) 8,000 units, (b) 6,000 units, and (c) indicate cost per unit at both the levels Assume that administration expenses are fixed for all levels of production.

4. BPL Ltd. wishes to arrange overdraft facilities with its banker during the period April to June 2008, when it will be manufacturing mostly for stock. Prepare cash budget for the above period from the following data, indicating the extent of the bank facilities the company will require at the end of each month.

Month	Credit Sales (Rs)	Purchases (Rs)	Wages (Rs)
February 2008	1,80,000	1,24,800	12,000
March	1,92,000	1,44,000	14,000
April	1,08,000	2,43,000	11,000
May	1,74,000	2,46,000	10,000
June	1,26,000	2,68,000	15,000

(a) 50% of credit sales are realized in the month following the sales and the remaining 50% in the second month following. Creditors are paid in the month following the month of purchase. Lag in payment of wages 1 month.
(b) Cash at bank on 1-4-2008 Rs.25, 000

5. Prepare a Flexible Budget for production at 80 per cent and 100 per cent activity on the basis of the following information:

Production at 50% capacity - 5,000 units
Raw materials - Rs.80 per unit
Direct labour - 50 per unit
Direct expenses Rs. 50,000 (50% fixed)
Administration expenses - Rs. 60,000 (60% variable)

6. Prasad and Co. wishes to prepare cash budget from January. Prepare a cash budget for the first six months from the following estimated revenue and expenses:

(Amount in Rs.)

Month	Total sales	Materials	Wages	Production overheads	Selling and distribution overheads
January	10,000	10,000	2,00	1,600	400
February	11,000	7,000	2,200	1,650	450
March	14,000	7,000	2,300	1,700	450
April	18,000	11,000	2,300	1,750	500
May	15,000	10,000	2,000	1,600	450
June	20,000	12,500	2,500	1,800	600

Additional Information

1. Cash balance on 1st January was Rs. 5,000. New machinery is to be installed at Rs. 10,000 on credit, to be repaid by two equal instalments in March and April.
2. Sales commission @ 5% on total sales is to be paid within a month of following actual sales.
3. Rs. 5,000 being the amount of 2nd call may be received in March. Share Premium amounting to Rs. 1,000 is also obtainable with the 2nd call.
4. Period of credit allowed by suppliers- 2 months.
5. Period of credit allowed to customers- 1 month.
6. Delay in payment of overheads- 1 month.
7. Delay in payment of wages- ½ month.
8. Assume cash sales to be 50% of total sales.

7. The expenses of budgeted production of 10,000 units in a factory are furnished below:

	Per Unit (Rs.)
Materials	70
Labour	25
Variable Overhead	20
Fixed Overhead (Rs. 1,00,000)	10
Variable Expenses (Direct)	5
Selling Expenses (10% Fixed)	13
Distribution Expenses (20% Fixed)	7
Administration Expenses (Rs. 50,000)	5
Total Cost per unit (to make and sell)	155

Prepare a budget for production of:
(a) 8,000 units, (b) 6,000 units, and (c) indicate cost per unit at both the levels Assume that administration expenses are fixed for all levels of production.

7. BPL Ltd. Wishes to arrange overdraft facilities with its banker during the period April to June 2008, when it will be manufacturing mostly for stock. Prepare cash budget for the above period from the following data, indicating the extent of the bank facilities the company will require at the end of each month.

Month	Credit Sales (Rs)	Purchases (Rs)	Wages (Rs)
February 2008	1,80,000	1,24,800	12,000
March	1,92,000	1,44,000	14,000
April	1,08,000	2,43,000	11,000
May	1,74,000	2,46,000	10,000
June	1,26,000	2,68,000	15,000

(a) 50% of credit sales are realized in the month following the sales and the remaining 50% in the second month following. Creditors are paid in the month following the month of purchase. Lag in payment of wages 1 month.

(b) Cash at bank on 1-4-2008 Rs.25, 000

* * * * *

Karpagam Academy of Higher Education
(Deemed University Established Under Section 3 of UGC Act, 1956)
Coimbatore - 641 021.
Management Accounting (16CCU502A)

UNIT V

S.NO	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
1	Budgetary control is a _______ of costing.	Mental	Technique	Kind	Analysis	Technique
2	The process of preparing a budget is known	Budget	Budgeting	Budgetary control	Budget Cost	Budgeting
3	The explanation of MBE is	Management by exception	Management, botany,	Master of business	Management by Objectives	Management by exception
4	MBO means	Management by exception	Management by organization	Management by objectives	Master of business	Management by objectives
5	Budgetary control and budgets are the _______	same	Different	Variable	Equal	same
6	Budgetary control relates to	Persons	A product	Both a and b	Producer	Persons
7	Both budgetary control and _______ systems are interrelated.	Marginal costing	Standard costing	Budgeting	Break Even	Standard costing
8	The ________ is the document which lays down the details of the budgeting organization	Budget manual	Budget committee	Budget procedure	Budget Cost	Budget manual
9	The period covered by a budget is known as _____	Budget committee	Budget period	Budget manual	Budget Cost	Budget period
10	Generally the budget period is _____	two years	three years	one year	five years	one year

11	In most of the companies, the key factor	Production	Finance	Sales	Cost	Sales
12	________ budget is one among the functional budgets.	Sales	Capital	Fixed	Responsibility	Sales
13	_______ budget is concerned with estimating the probable Output of each product in the	Sales	Production	Cash	Advertising	Production
14	_____ refers to the quantity of work that can be performed in one hour.	Standard quantity	Standard hour	Actual hour	Machine Hour	Standard hour
15	Zero base budgeting overcomes the weakness of _______	Conventional budgeting	Sales budget	Production budget	Cash Budget	Conventional budgeting
16	A master budget is also known as _______ all functional budgets.	Summary	Production	Sales	Finance	Summary
17	A fixed budget is useful only when the actual level of activity corresponds to the ______	Actual	Budgeted	Manual	Financial	Budgeted
18	A_______ is a department or section of the organisation defined for the purpose of	Budget committee	Budget centre	Budget manual	Budgeting	Budget centre
19	_____ is a factor whose influence effects all other budgets.	Key factor	Production	Sales	Finance	Key factor
20	A _______ budget is one which is established for use unaltered over a long period of time	Basic	Current	Sales	Production budget	Basic
21	________ is a plan of estimated receipts and payment of cash for the budget period	Cash budget	Sales budget	Production budget	Conventional Budget	Cash budget
22	_______ budget is one which incorporate all functional budgets.	Master	Flexible	Sales	Finance	Master
23	________ budget is a budget which is designed to change in accordance with the level of	Master	Flexible	Fixed	Variable	Flexible
24	_______ budget is a budget which is designed to remain unchanged irrespective of the level of	Master	Flexible	Fixed	Variable	Fixed

25	The difference between the budgeted figures and actual figures is ___	Variance	Profit	Sales	Cost	Variance
26	______ ration gives the percentage of actual hours worked to the budgeted hours.	Capacity	Efficiency	Activity	Effect	Capacity
27	Sales budget is _______	a functional budget	Expenditure budget	Master budget	Production budget	a functional budget
28	The difference in fixed cost and variable cost is a special significance in the preparation of	Cash budget	Static budget	Flexible budget	Production budget	Flexible budget
29	The budget which is prepared first of all is _______	Budget for key factor	Cash budge	Master budget	Flexible budget	Budget for key factor
30	A budge manual contains a summary of _______	All financial budgets	Ratios	The responsibility of the persons	Statements	The responsibility of
31	Key factor is also known as ___ factor	principal	Limiting	Governing	normal	principal
32	The budgets are proper for a given level of activity, the budget is prepared before the	Flexible	Fixed	Sales	Master	Flexible
33	A factor which influences all other budget	Limiting factor	Production factor	Master budget	Production budget	Limiting factor
34	_____ budget is a plan of estimated receipts and payments of cash for the budget period.	Cash	Sales	Production	Raw material	Production
35	Before the implementation of the master budget it must be approved by the ________	Budget committee	Board of directors	Share holders	Government	Budget committee
36	Both budgetary control and _______ systems are inter related .	Marginal costing	Budgeting	Standard costing	Process costing	Budgeting
37	________ is based on prospective approach	Performance budgeting	Flexible budgeting	Zero base budgeting	Master Budget	Performance budgeting
38	Zero base budgeting technique was first used in America in __	1960	1962	1968	1970	1962

39	Zero base budgeting was originally developed by _________	Peter a. pyre	Brown & Howard	ICMA	ICWA	Peter a. pyre
40	Ratios which are used to compare, to control and to appraise the operations of the	Control ratios	Current ratios	p/v ratio	Profitability Ratios	Control ratios
41	Budgetary control is a system which uses budget as a means of _________ and	Planning	Staffing	Co-Ordination	Organizing	Planning
42	A budget is a plan of action for a ________ period.	Previous	Future	Both a and b	Present	Future
43	A budget guides every manager in the process.	Planning	Staffing	Organizing	Decision making	Decision making
44	In budgetary control ____ costs are recorded	Actual	Variable	Fixed	Semi - variable Cost	Actual
45	Budgeted costs are compared with_________	Actual costs	Variable costs	Fixed costs	Semi - variable Cost	Actual costs
46	Activities of various departments are ________	Planned	Organized	Co-Ordination	Decision	Co-Ordination
47	The ________ of a business must be defined clearly	Objectives	Delegation	Co-Operation	Flexibility	Objectives
48	Budgeting must have the complete _______ of the top management.	Objectives	Delegation	Co-Operation	Flexibility.	Co-Operation
49	Employee should be educated about the merits of ______ systems.	Budgeting	Budgetary control	Budget	Budget Cost	Budgetary control
50	The employees must be ________ to improve their efficiency.	Motivation	Reporting	Follow up action	Cost of operation	Motivation
51	A good budgetary control system should include ______	Motivation	Reporting	Follow up action	Cost of operation	Follow up action
52	The __________ of budgetary control system should be considered	Motivation	Reporting	Follow up action	Cost of operation	Cost of operation

53	A good organization must be developed in order to achieve ____ benefits.	Maximum	Minimum	Both a and b	Average	Maximum
54	The _______ must should not be an expensive one.	Motivation	Reporting	Follow up action	Cost of operation	Cost of operation
55	A _______ may be a department or section of a department or any other part of the department.	Budgetary control	Budges centers	Budget manual	Budget Cost	None of these
56	Budgets centers is also necessary for ________purpose	Control	Co-ordinate	Motivate	Organize	Control
57	The head or a budgetary control organisation is designed as the________	Budgetary control	Budges centers	Budget officer	Budget manual	Budget officer
58	_______ is a written record.	Budgetary control	Budges centers	Budget officer	Budget manual	Budget manual
59	The budget officer is assisted by a ________	Budgetary control	Budges centers	Budget committee	Budget period	Budget committee
60	The _____ may be short term or long term.	Budgetary control	Budget centers	Budget committee	Budget period	Budget period