MANAGEMENT ACCOUNTING

Semester – I

19CMP102 4H – 4C

Instruction Hours / week: L:3 T:1 P : 0 Marks: Internal: 40 External: 60 Total: 100

End Semester Exam: 3 Hours

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COURSE OBJECTIVES:
To make the students

1. To Understand the Concept of management accounting, costing behaviour, budgeting and enrich the lifelong learning.
2. To comprehend on the contemporary issues relevant to accounting concepts.
3. To analyse the alternatives using appropriate tools and techniques.
4. To solve the problems and take decisions based on the result.
5. To communicate orally and in written form the concepts and solutions.

COURSE OUTCOMES:
Learners should be able to

1. Understand the Concept of management accounting, costing behaviour, budgeting and enrich the lifelong learning.
2. Comprehend on the contemporary issues relevant to accounting concepts.
3. Analyse the alternatives using appropriate tools and techniques.
4. Solve the problems and take decisions based on the result.
5. Communicate orally and in written form the concepts and solutions.

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 :FINANCIAL STATEMENT ANALYSIS

Horizontal and Vertical Analysis.
Ratio Analysis: Meaning, Advantages, Limitations, Classifications of ratios
Fund Flow Statement: Meaning, Uses, Limitations, Sources and uses of funds
Cash Flow Statement: Meaning, Uses, Limitations, Sources and uses of cash, AS3 Standard format.

UNIT III : STANDARD COSTING

Standard Costing : Standard Costing and Variance Analysis: Meaning of standard cost and standard costing, advantages, limitations and applications. Variance Analysis – material, labour, overheads and sales variances. Disposition of Variances, Control Ratios.

UNIT IV :MARGINAL COSTING AND DECISION MAKING

Absorption versus Variable Costing: Distinctive features and income determination. Cost-Volume Profit Analysis, Profit / Volume ratio. Break-even analysis-algebraic and graphic methods. Angle of incidence, margin of safety, Key factor, determination of cost indifference point.

Decision Making : Steps in Decision Making Process, Concept of Relevant Costs and Benefits, Various short term decision making situations – profitable product mix, Acceptance or Rejection of special/ export offers, Make or buy, Addition or Elimination of a product line, sell or process further, operate or shut down. Pricing Decisions: Major factors influencing pricing decisions, various methods of pricing

UNIT V: BUDGETARY CONTROL AND CONTEMPORARY ISSUES :
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.

Contemporary Issues : Responsibility Accounting: Concept, Significance, Different Responsibility Centres, Divisional Performance Measurement: Financial and Non-Financial measures. Transfer Pricing

Note: Distribution of marks - 30% theory and 70% problems

SUGGESTED READINGS:

1. M.Y. Khan, P.K. Jain (2017), Management Accounting, 7th Edition, McGraw Hill Education, New Delhi.
2. Dr S N Maheshwari, CA Sharad K Maheshwari & Dr Suneel K Maheshwari (2018), A Textbook of Accounting for Management, 4th Edition S Chand Publishing, New Delhi.
3. AlnoorBhimani, Charles T. Horngren, Srikant M. Datar, Madhav Rajan (2015) Management and Cost Accounting,6th edition, Pearson Education, New Delhi.
4. Narasimhan (2017), Management Accounting, Cengage Learning Publishing, New Delhi.
5. The Institute of Company Secretaries of India (2018), Corporate and Management Accounting, M P Printers

LECTURE PLAN

S.No.	Lecture Duration	Topics to be Covered	Support Materials
Unit I			
1	1	Management accounting – Meaning, Definition, Nature	T: 1-2
2	1	Management accounting – Scope, importance, utility	T" 2-3, W1
3	1	Management accounting – Features, advantages, limitations	T: 3-4
4	1	Cost management – Meaning, definition, scope	T: 4-6
5	1	Cost management – Objectives, importance	T: 6-10
6	1	Management accounting Vs Financial accounting	R1: A.21-A23
7	1	Management accounting Vs Cost accounting	R1: A.24-A26
8	1	Cost control – Reason, steps, cost reduction, expenses, wastages	R1: A.27-A29
9	1	Recapitulation and important question discussion	
Total Hours			**9**
Unit II			
1	1	Financial statement analysis – Meaning, Merits, Tools – Common size, comparative statements, trend analysis	R1: B3-B22, W2
2	1	Ratio analysis –Meaning, features, classification – short-term, solvency ratio – Current and Liquid ratio, Long-term solvency ratio – Debt Equity Ratio	R1: B21-B24
3	1	Turnover ratio – Stock, debtors, creditors, profitability ratio, capital gearing ratio	R1: B31-B55
4	1	Fund flow statement – Meaning, uses, limitations, procedure	T: 98-103
5	1	Schedule of changes in working capital	T: 103-116
6	1	Statement of sources and application of funds	T: 116-127
7	1	Cash flows – Meaning, significance, limitations	R2: 7.1-7.26
8	1	Preparation of cash flow statement	R2: 7.30-7.47
9	1	Recapitulation and important question discussion	
Total Hours			**9**
Unit III			
1	1	Standard costing – Meaning, definition, steps, standard cost Vs Total cost	T: 629-633
2	1	Standard costing – Advantages, limitations	T: 633-635, W3
3	1	Types of standards, setting of standard cost	T: 636-639
4	1	Material cost variance, material price variance, material usage variance, material mix variance, material yield variance	T: 640-649

S.No.	Lecture Duration	Topics to be Covered	Support Materials
5	1	Labor cost variance, labor rate variance	T: 649-652
6	1	Labor efficiency variance, labor mix variance	T: 653-655
7	1	Overhead cost variance, expenditure variance	T: 656-661
8	1	Volume variance, efficiency variance, capacity variance, Calendar variance	T: 662-670
9	1	Recapitulation and important question discussion	
Total Hours			**9**
Unit IV			
1	1	Marginal costing – Meaning, definition, features, assumption, merits, demerits	R2: 10.1-10.11
2	1	Marginal cost statement, contribution, marginal cost equation, profit volume ratio, cost volume profit analysis	R2: 10.11-10.15
3	1	Break even analysis – Break even point, cash break even point, advantages and limitations of break even point	R2: 10.16-10.21, W4
4	1	Angle of incidence – calculation of contribution	R2: 10.22-10.26
5	1	Calculation of BEP, Margin of safety, managerial application of marginal costing	R2: 10.27-10.34
6	1	Pricing decisions, profit planning, maintaining a desired level of profit, make or buy decision	T: 502-508
7	1	Problems of limiting factor, selection of a profitable sales mix, effect of changes in sale	T: 508-514
8	1	Alternate method of production. Evaluation of performance, capital investment decision	T: 515-523
9	1	Recapitulation and important question discussion	
Total Hours			**9**
Unit V			
1	1	Budget, Budgetary control – Meaning, Definition, Nature	T: 571-582
2	1	Budgetary control – Features, advantages, limitations	T: 583-591, W5
3	T	Budget classification	T: 591-603
4	1	Fixed and flexible budget, sales and production budget	T: 604-612
5	1	Cash budget, master budget, Zero based budgeting	T: 612-623
6	1	Responsibility accounting – Meaning, Definition, features, steps	R1: C.32-C.38
7	1	Responsibility centre – cost, profit, revenue, investment centre	R1: C.38-C.44
8	1	Transfer price- Meaning, definition, features	R1: C.44-C.59

S.No.	Lecture Duration	Topics to be Covered	Support Materials
9	1	Recapitulation and important question discussion	
10	1	Discussion of previous year ESE Question Paper	
11	1	Discussion of previous year ESE Question Paper	
12	1	Discussion of previous year ESE Question Paper	
Total Hours			**12**

T: Khan, M.Y and Jain, P.K. 2017. Management Accounting. 7th Edition, Tata Mc Grew Hill, New Delhi
R1: Maheswari, S.N, Sunel R. Maheswari, SH and K Maheswari. 2018. A Text Book on Accounting for Management, 4th Edition, S.Chand Publishing, New Delhi
R2: Shashi K. Gupta, Sharma. 2014. Management Accounting. 7th Edition, Kalyani Publishers, Ludhiana
W1 www.tutorialspoint.com
W2: www.ratioanalysis.com
W3: www.standardcosting.html
W4: www.marginalcosting.html
W5: www.yourarticlelibrary.com

UNIT I

SYLLABUS

Introduction: Meaning, Objectives, Nature and Scope of Management Accounting, Difference between Cost 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.,

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.

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

1. 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.
2. 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

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Management Accounting (19CMP102)
Unit –I

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
1.	Costing is a technique of ________________	Ascertainment of cost	analyzing of cost	utilization of cost	cost reduction	Ascertainment of cost
2.	Cost accounting provide data for managerial________________	Planning	Organizing	Decision making	Decision Making and cost controlling	Decision Making and cost controlling
3.	Cost accounting is a separate ____________of accounting.	No branch	Branch	Batch	No Batch	Branch
4.	Cost accounting serves the information needs of ____________	Management	Financial	Marketing	Owners	Management
5.	Cost accounting has been developed because of ___________ of financial accounting	Advantages	Limitations	Importance	Cost	Limitations
6.	Management accounting is concerned with accounting information that is useful to -----	Financial	Cost	Management	Auditing	Management

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
7.	_________accounting deals with monetary as well as non-monetary information	Cost	Financial	Management	Auditing	Management
8.	Historical costing is also known as __________	Uniform costing	Standard costing	Traditional costing	Job costing	Traditional costing
9.	_______ is a technique / process of ascertaining cost	Costing	Cost	Cost accounting	Management accounting	Costing
10.	________ is ascertainment of cost after they have been incurred.	Marginal costing	Historical costing	Direct costing	Indirect costing	Historical costing
11.	________ is used of same costing principle or practices by several undertaking for common control or comparison of costs	Uniform costing	Marginal costing	Standard costing	Job Costing	Uniform costing
12.	__________ methods has been dropped from the latest CIMA terminology	Multiple costing	Farm costing	Operating costing	Job Costing	Farm costing
13.	Cost accounting can be used only by ________ concerns	Big	Small	Big and Small	Trading	Big and Small

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
14.	Many theories can be proved or disproved in the light of basic principles of _________	Cost accounting	Management accounting	Financial accounting.	Financial management	Financial accounting.
15.	________ cost are those costs incurred to maintain the earning capacity of the firm	Capital	Revenue	Direct	Indirect	Capital
16.	The chief objective of management accounting is to serve ---------	Public	Employees	Management	Government	Management
17.	The term management accounting was first coined by the British team of accountants they visited the -----------	USA	China	India	Japan	USA
18.	Management accounting involves---------	Recording of costs	Recording of transaction	Preparation of accounts	Analysis and interpretation of data	Analysis and interpretation of data
19.	Management accounting is also known as ----	Cost accounting	Financial accounting	Corporate accounting	Decision accounting.	Decision accounting.
20.	Management accounting functions are ------	Complementary in nature	Contradictory in nature	Neutral effect	Opposite effect	Complementary in nature
21.	Management accounting provides valuable services to management in performing. -----	Planning functions	Controlling functions	Co-ordinating functions	All managerial functions.	All managerial functions.

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
22.	Management accounting is ----------	An extension of financial accounting.	An extension of cost accounting.	An extension of auditing	An extension of cost accounting and Management accounting	An extension of cost accounting and Management accounting
23.	Management accounting is concerned with formulation of ________ to meet enterprise objectives.	Plans	Cost	Purchase	Sales	Plans
24.	Installation of management accounting is purely -------	Compulsory	Optional	Optimum	Fixed	Optional
25.	The term of appointment of financial controller may be fixed by the ------------	Board of Directors	Articles of association	Memorandum of Association	Chairman	Board of Directors and Articles of Association
26.	Financial accounting deals with -----------	Determination of costs	Determination of profits	Determination of prices	Determination of production	Determination of profits
27.	The term management accounting was first used in the year -------------	1910	1939	1950	1970	1950
28.	Preparation of financial accounts is compulsory for -------------	Sole trader business	Partnership firm	Joint stock companies	Co-operative socities	Joint stock companies
29.	______is the oldest branch of accounting.	Management accounting	Cost accounting	Financial accounting	Corporate accounting.	Financial accounting

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
30.	Management accounting also comprises the preparation of financial reports for non-management groups such as -----------	Shareholders	Creditors	Tax authorities	Tax authorities, Shareholders and Creditors	Tax authorities, Shareholders and Creditors
31.	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
32.	____ is also known as Management oriented accounting.	Management accounting	Cost accounting	Financial accounting	Corporate accounting	Management accounting
33.	_____is concerned with accounting information which is useful to management in maximizing profits or minimizing losses.	Management accounting	Cost accounting	Financial accounting	Corporate accounting	Management accounting
34.	_______ is the general accounting which relates to the recording of business transactions in the books of business transactions and in the books of prime entry.	Financial accounting	Cost accounting	Management accounting	Budgeting.	Financial accounting
35.	_____is the process and techniques of ascertaining costs.	Management accounting	Financial accounting	Cost accounting	Budgeting	Cost accounting
36.	---------------- is important part of management accounting	Budgeting	Fixing standards	Inventory control	Interpretation of data	Interpretation of data

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
37.	The primary objective of----------------- is to enable the management to maximize or minimize losses	Cost accounting	Financial accounting	Management accounting	Auditing	Management accounting
38.	The main objective of management accounting is to present-------------------- information to the management	Cost	Financial	Auditing	Sales	Financial
39.	Management accounting makes-------- process more modern and scientific by providing significant information relating to various alternatives in terms of cost and Revenue	Forecasting	Planning	Decision making	Budgeting	Decision making
40.	Management accounting is a useful advice of managerial --------------------	Planning	Control	Motivation	Forecasting	Control
41.	Return on capital employed is one of the tools of -------------	Financial accounting	Cost accounting	Corporate accounting	Management accounting	Management accounting
42.	_____ of data are considered as back bone of management accounting	Modification of data	Analysis and interpretation	Communication	Co-ordination	Analysis and interpretation
43.	Management accounting is an important medium of ______	Motivation	Co-ordination	Communication	Delegation	Communication

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
44.	_____ supplies analytical information regarding various alternatives and the choice of management is made easy.	Financial accounting	Management accounting	Cost accounting	Corporate accounting	Management accounting
45.	____ is the essence of managerial activity	Co-ordination	Control	Motivation	Decision making	Co-ordination
46.	Incremental cost is a type of ---------------	Differential cost	Out-of-pocket cost	Conversion cost	Factory	Differential cost
47.	Fixed cost per unit increases when ---------------	Production volume decreases	Production volume increases	Variable cost per unit decreases	Sales Increases	Production volume decreases
48.	Opportunity cost helps in ------------	Ascertainment of cost	Controlling cost	Making managerial decisions	Sales Decisions	Making managerial decisions
49.	Closing stock are valued at cost price or market price whichever is less in -----	Financial accounting	Cost accounting	Management accounting	Corporate Accounting	Financial accounting
50.	Direct material+ Direct labour+ Direct expenses =	Fixed cost	Prime cost	Factory cost	Total cost	Prime cost
51.	Salary of general manager is generally treated as --------	Factory overhead	Administrative overhead	Selling overhead	Distribution overhead	Administrative overhead
52.	_______of any product comprises of all direct cost	Work cost	Prime cost	Total cost	Factory Cost	Prime cost
53.	________means and represents the factory cost plus administrative expenses	Prime cost	Work cost	Cost of production	Cost of sales	Cost of production

S.No.	Question	Option - I	Option - II	Option - III	Option - IV	Answer
54.	Indirect material + indirect labour +__________ = overhead	Indirect expenses	Direct labour	Direct expenses	Factory overhead	Indirect expenses
55.	,_________ is the sales overhead	Office salaries	Advertisement expenses	Factory rent	Indirect material	Advertisement expenses
56.	Prime cost =	Direct material+direct labour+direct expenses	Direct material+labour direct expenses	Inmaterials +direct expenses	Inmaterials +Indirect expenses	Direct material+direct labour+direct expenses
57.	Works cost =	Prime cost+factory cost	Prime cost+Selling overhead	Prime cost+administrative overhead	Prime cost+ Selling overhead	Prime cost+factory cost
58.	Cost of production =	Work cost + factory cost	Work cost + prime cost	Work cost x prime cost	Work cost + administrative overhead	Work cost + administrative overhead
59.	Which of the following is equal to total cost?	Cost of production + Selling and distribution expenses	Cost of sales+ distribution overhead	Cost of production + administrative overhead	Cost of sales	Cost of production+Selling and distribution expenses
60.	The work cost is also known ----------	Factory cost	Prime Cost	cost of production	cost of sales	Factory cost

UNIT II

SYLLABUS

Financial Statement Analysis – Horizontal and Vertical Analysis. Ratio Analysis : Meaning, Advantages, Limitations, Classification of Ratios. Fund Flow Statement: Meaning, Uses, Limitations, Sources and Uses of Funds. Cash Flow Statement: Meaning, Uses, Limitations, Sources and uses of cash, standard format.

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

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

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

$$= \mathbf{2.7:1}.$$

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

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

$$= \mathbf{1.8:1.}$$

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

$= \frac{1,20,000}{3,00,000} \times 100$

$=$ 40%

4) Debtors' Turnover Ratio $= \frac{\text{Net Sales}}{\text{Average Debtors}}$

$= \frac{3,00,000}{19,000}$

$=$ 15.78 times.

Collection Period $= \frac{\text{No. of days in the year}}{\text{Debtors' Turnover}}$

$= \frac{365}{15.78}$

$=$ **23 days**

5) Fixed Asset to Net Tangible Worth $= \frac{\text{Fixed Assets}}{\text{Proprietor's Fund}} \times 100$

$= \frac{1,50,000}{1,97,500} \times 100$

$=$ **76%**

6) Turnover to Fixed Assets $= \frac{\text{Net Sales}}{\text{Fixed Assets}}$

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

= **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 = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

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

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

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.

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

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

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

$$= 1:1.$$

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.

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

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

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.

$$\text{(v) Capital gearing ratio} = \frac{\text{Owners' resources}}{\text{Fixed-interest bearing resources}}$$

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

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

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

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

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

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

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

$$= 2.13 \text{ times.}$$

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:

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

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

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

= 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:

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

$$= 6.8 \text{ times}$$

Average collection period

$$= \frac{360 \text{ days}}{\text{Debtors' Turnover}}$$

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

$$= 53 \text{ days}$$

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**

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

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

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

$$= 4.12 \text{ times.}$$

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.

FUND FLOW STATEMENT

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 current assets and current liabilities are shown through the schedule of changes in working capital.	In cash flow statement changes in current assets and current 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.

S.No.	Basis of Difference	Fund Flow Statement	Cash Flow Statement
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

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KARPAGAM ACADEMY OF HIGHER EDUCATION
(Deemed-to-be-University)
(Established Under Sec. 3 of UGC Act, 1956)
Coimbatore – 641 021.

Management Accounting (19CMP102)
Unit –II

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
1.	The word 'fund' means the difference between ____________	Current Assets	Current Liabilities	Current Assets and Current Liabilities	No Assets	Current Assets, Current Liabilities
2.	Purchases of plant will mean___________ in working capital	increase	decrease	Liquidity	current	decrease
3.	Issue of capital will mean_________in working capital	increase	decrease	Liquidity	current	increase
4.	Goodwil is a __________ transaction	Fund	Non-Fund	current	Non-Current	Non-Fund
5.	Depreciation of Machinery is ___________	Source of Funds	Application of Funds	No flow of funds	Flow of funds	No flow of funds
6.	Which of the following are non-current iterm____________	Share premium	sundry creditors	bank balance	payment of wages	Share premium
7.	Which of the following will result into application of funds___________	Purchase of plant	Issue of share capital	payment of dividend	payment of creditors	Purchase of plant
8.	State which of the following is non-current liability___________	Mortgage loan	bank balance	outstanding salary	creditors	Mortgage loan
9.	Cash flow statement is useful for __________term financial anaysis	Long	Short	Medium	Short and Long	Short
10.	Cash comprises cash on hand and _____ deposit with banks	Current	fixed	Demand	Saving	Saving
11.	Cash flows are ___________of cash and Cash equivalents	inflow	outflow	inflow and out flow	sources	inflow and out flow
12.	Cash payments to suppliers for goods and	investing	operating	Non-operating	Non-investing	operating

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
	services are classified as cash flow from __________activities					
13.	Decrease in creditors is ______of cash	inflow	outflow	inflow and out flow	source	inflow
14.	The term 'Fund' refers to ----------	Reserves	Working capital	Profits	Loss	Working Capital
15.	Gross working Capital is the __________	Total value of current assets	Total value of fixed assets	Total value of current liabilities	Total value of permanent liabilities	total value of current assets
16.	Fund from operation is _________	Gross profit	Net profit	operating profit	non-operating profit	Operating profit
17.	Depreciation is ------------	An external source of funds	Application of Funds	A non fund item	A non-operating item	A non-fund item
18.	Proposed dividend, if already reduced while ascertaining net profit, is __________	Added back to Net profit to find fund from operations	to be reduced from net profit	ignored while ascertaining fund from operations	nill effect	Added back to Net profit to find fund from operations
19.	Sale of fixed asset is _________	An item of funds from operation	an external source of fund	an application of fund	a flow of fund	an external source of fund
20.	Short term investment is _____________	a current asset	a current liability	an application of fund	a source of fund	a current asset
21.	Payment of dividend is ______________	An application of fund	a source of fund	Fixed expenses	operating expenses	An application of funds
22.	Income tax paid is ___________	current liability	current asset	an application of fund	a source of fund	An application of funds
23.	Funds inflow from operation is	an internal source of funds	an application of funds	an external source of funds	net profit	An internal source of funds
24.	Purchase of fixed assets by issue of shares is __________	Source of Funds	Application of Funds	an item to be ignored in Funds	An item to be added in fund	An item to be ignored in fund

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
				flow analysis	flow	flow analysis
25.	Issue of bonus shares out of reserves __________	increase in working capital	decrease in working capital	does not affect working capital	Flow of funds	does not affect working capital
26.	Difference between current assets and current liabilities is __________	permanent capital	working capital	additional capital	debt capital	Working Capital
27.	___________ in current assets increases working capital	increase	decrease	constant	permanent	increase
28.	___________ in current liability increases working capital	increase	decrease	constant	permanent	decrease
29.	Loss on sale of fixed assets is a_________ item	Non- fund	non - operating	opreating	current	Non-Fund
30.	Purchase of long term investment is an _________ of funds	Source of Funds	Application of Funds	flow of funds	no flow of funds	Application of funds
31.	Issue of debenture for cash is --------- item	Source of Funds	Application of Funds	flow of funds	no flow of funds	Source of funds
32.	Redemption of preference shares is an ------ item	Source of Funds	Application of Funds	flow of funds	no flow of funds	Application of funds
33.	Dividend received is an ________ source of funds	External	internal	Current	Non current	External
34.	Cash flow includes _________	Cash receipts only	cash payments only	cash receipts and payments	cash and non cash incomes and expenses	cash receipts and payments
35.	Cash from operation is the result of _________	profit from business activities	cash from business activities and changes in current assets and liabilities	sale of fixed assets	borrowing from outside source	cash from business activities and changes in current assets and liabilities
36.	Income from long term investment is	Source of cash	application	cash inflow from	cash out flow	Source of cash

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
	___________		of cash	operations	from operations	
37.	Premium on redemption of debentures is _______	cash inflow	cash outflow	an income	an asset	Cash outflow
38.	Dividend paid is usually treated as	An application of cash	Source of cash	loss	gain	An application of cash
39.	Cashflow includes cash inflows and cash _____	outflows	movements	changes	transactions	outflows
40.	Cash from operation is a ______ of cash	source	application	external	fundamental	source
41.	Cash outflow on account of operation is an _______ of cash	Sources	Application	Income or loss	expenditure	Application
42.	Increase in current assets _________ in cash	increase in cash	decrease in cash	no change in cash	loss in cash	decrease in cash
43.	Increase in current liability _______ in cash	increase in cash	decrease in cash	no change in cash	loss in cash	increase in cash
44.	Tax paid usually shown as an _________ of cash	application	finance	source	loss	application
45.	Issue of shares result in ________ in flow	cash	Credit	debit	loss	cash
46.	Purchase of fixed assets is an ______ of cash	application	Source of cash	loss of cash	gain of cash	application
47.	Purchase of building by issue of debenture is a __________ item and it is ignored in cash flow statement	Non-cash	Non-fund	operating	non-operating	non- cash
48.	Cash flow statement usually starts with opening balance of cash and Bank balance and _________ with closing balance of cash and bank balance	ends	begins	selects	starts	ends
49.	Cash from oepration reveals _______	fund generated from routine and normal business	cash generated from routine or normal	cash generated from non operating business activities	fund generated from non operating business	cash generated from routine or normal business operations

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
		operations	business operations		activities	
50.	Cash flow statement is prepared on the basis of ___________	income statement	balance sheet	fund flow statement	income statement, balance sheet and additional data	income statement, balance sheet and additional data
51.	Decrease in current assets ___________ in working capital	increase	decrease	constant	permanent	decrease
52.	Redemption of debentures by converting them into shares is __________	Application of cash	Source of Cash	to be ignored	to be included	to be ignored
53.	Cash received from sale of long term investments is __________	source of csh	application of cash	loss of cash	gain of cash	source of cash
54.	Premium charged on issue of shares is also _____________	Source of funds	application of funds	non fund item	non operatng expenses	Source of funds
55.	Goodwill written off should be ___________ while ascertaining fund from operations	to be added back to net profit	deducted from net profit	ignored	considered	to be added bacl to net profit
56.	Preliminary expenditure written off is a ________	Non fund expeneses	non-operating income	non- operating expenses	non- fund incomes	non- fund expenses
57.	A source of fund always ______ cash position	increases	decreases	may or maynot increase	may or may not decrease	may or may not increases
58.	Increase in profit is a ___________ source of funds	internal	external	debtors	investors	internal
59.	Issue of bonus shares is a _______ of funds	sources	application	No flow of funds	Inflow of funds	no flow of funds
60.	Purchased of fixed assets is _________ of cash	source	application	No flow of funds	Outflow of funds	application

UNIT III

SYLLABUS

Standard Costing: Standard Costing and Variance Analysis: Meaning of Standard Cost and Standard Costing, Advantages, Limitations and Applications. Variance Analysis – Materials, Labour, Overheads and Sales Variances, Disposition of Variance, Control Ratios.

Standard Costing

The word 'standard' means a benchmark or gauge. The 'standard cost' is a predetermined cost which determines in advance what each product or service should cost under given circumstances. The technique of using standard costs for the purposes of cost control is known as standard costing.

Definitions of standard costing

Backer and Jacobsen define "Standard cost is the amount the firm thinks a product or the operation of a process for a period of time should cost, based upon certain assumed conditions of efficiency, economic conditions and other factors".

Chartered Institute of Management Accountants, London defines standard cost as "a predetermined cost which is calculated from management's standards of efficient operation and the relevant necessary expenditure". They are the predetermined costs based on technical estimate of material, labour and overhead for a selected period of time and for a prescribed set of working conditions.

Brown and Howard define "standard costing is a technique of cost accounting which compares the standard cost of each product or service with actual cost to determine the efficiency of the operation so that any remedial action may be taken immediately".

The terminology of Cost Accountancy defines standard costing as “the preparation and use of standard costs, their comparison with actual costs, and the analysis of variance to their causes, and points of incidence”.

The London Institute of Cost and Works Accountants define it as "An estimate cost, prepared in advance of production or supply correlating a technical specification of material and labour to the price and wage rates estimated for a selected period of time, with an addition of the apportionment of overheads expenses estimated for the same period within a prescribed set of working conditions”.

Further, it is a system of cost accounting which is designed to find out how much should be the cost of a product under the existing conditions. The actual cost can be ascertained only when production is undertaken. The predetermined cost is compared to the actual cost and a variance between the two enables the management to take necessary corrective measures.

STEPS INVOLVED IN STANDARD COSTING

The technique of standard costing involves the determination of cost before occurring. The standard cost is based on technical information after considering the impact of current conditions. With the change in condition, the cost also can be modified so as to make it more realistic. The standard cost is divided into standards for materials, labour and overheads. The actual cost is recorded when incurred. The standard cost is compared to the actual cost. The difference between the two costs is known as variance. The variances are calculated element wise. The management can take corrective measures to set the things right on the basis of different variances.

The basic purpose of standard costing is to determine efficiency or inefficiency in manufacturing a particular product. This will be possible only if both standard costs and actual costs are given side by side. Though standard costing system will be useful for all types of commercial and industrial undertakings but it will be more useful in those undertakings where production is standardized. It will be of less use in job costing system because every job has different specifications and it will' be difficult to determine standard costs for every job.

Advantages of Standard Costing

- **Measurement of Efficiency:** It is a tool for assessing the efficiency after comparing the actual costs with standard costs to enable the management to evaluate performance of various cost centres. By comparing actual costs with standard costs variances are determined and management is able to identify the place of inefficiencies. It can fix responsibility for deviation in performance. A regular check on various expenditures is also ensured by standard costing system. The standards are being constantly analysed and an effort is made to improve efficiency. Whenever a variance occurs the reasons are studied and immediate corrective measures are undertaken.

- **Production and Price Policy Formulation:** It becomes easy to formulate production plans by taking into account standard costs. It is also supportive for finding prices of various products. In case, tenders are to be submitted or prices are to be quoted in advance then standard costing produces necessary data for price fixation.

- **Reduction of Work:** In this system, management is supplied with useful information and necessary information is recorded and redundant data are avoided. The report presentation is simplified and only required information is presented in such a form that management is able to interpret the information easily and usefully. Therefore, standard costing reduces clerical work to a considerable extent

- **Management by Exception:** Management by exception means that everybody is given a target to be achieved and management need not supervise each and everything. The responsibilities are fixed and every body tries to achieve his targets. If the things are going as per targets then the management needs not to bother. Management devotes its time to other important things. So, management by exception is possible only when targets of work can be fixed. Standard costing enables the determination of targets.

Disadvantages of Standard Costing

- Standard costing cannot be used in those concerns where non-standard products are produced.
- The time and motion study is required to be undertaken for the process of setting up standards. These studies require a lot of time and money. Further, the process of setting up standards is a difficult task, as it requires technical skill.
- There are no inset circumstances to be considered for fixing standards. With the change in circumstances the standards are also to be revised. The revision of standard is a costly process.
- This system is expensive and small concerns may not afford to bear the cost. For small concerns the utility from this system may be less than the cost involved in it.
- The fixing of responsibility is not an easy task. The variances are to be classified into controllable and uncontrollable variances. The responsibility can be fixed only for controllable variances not in the case of uncontrollable.
- The industries liable for frequent technological changes will not be suitable for standard costing system. The change in production process will require a revision of standard. A frequent revision of standard will be costly. So this system will not be useful for industries where methods and techniques of production are fast changing

Standard Costing VS Budgetary Control

Standard costing and budgetary control have the common objective of cost control by establishing pre-determined targets. The actual performances are measured and compared with the pre-determined targets for control purposes. Both the techniques are of importance in their respective fields and are complementary to each other.

Points of Similarity:

There are certain basic principles which are common to both standard costing and budgetary control. These are:

1. The establishment of pre-determined targets of performance
2. The measurement of actual performance
3. The comparison of actual performance with the pre-determined targets.
4. The analysis of variances between the actual and the standard performance
5. To take corrective measures, where necessary.

Points of Difference:

In spite of so much similarity between standard costing and budgetary control, there are some important differences between the two, which are as follows:

	Standard Costing	**Budgetary Control**
Scope	Standard costs are developed mainly for the manufacturing function and sometimes also for making and administration functions	Budgets are compiled functions of the business such as sales, purchase, production, cash, capital expenditure, research & development, etc.,
Intensity	Standard costing is intensive in application as it calls for detailed analysis of variances	Budgetary control is extensive in nature and the intensity of analysis tends to be much less than that in standard costing.
Relation to accounts	In standard costing, variances are	In budgetary control,

	usually revealed through accounts	variances are normally not revealed through accounts and control is exercised by statistically putting budgets and actuals side by side.
Usefulness	Standard costs represent realistic yardsticks and, are therefore, more useful for controlling and reducing costs.	Budgets usually represent an upper limit on spending without considering the effectiveness of the expenditure in terms for output.
Basis	Standard cost are usually established after considering such vital matters as production capacity, methods employed and other factors which require attention when determining an acceptable level of efficiency.	Budgets may be based on previous year's costs without any attention being paid to efficiency.
Projection	Standard cost is a projection of cost accounts	Budget is a projection of financial accounts.

Analysis of Variances

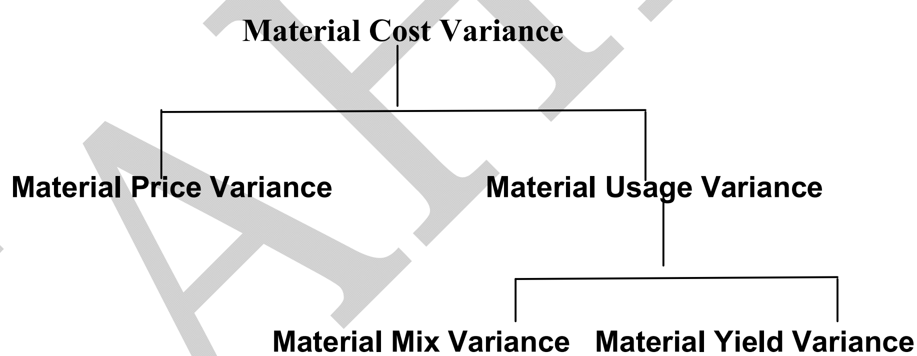
The divergence between standard costs, profits or sales and actual costs, profits or sales respectively will be known as variances. The variances may be favourable and unfavourable. If actual cost is less than the standard cost and actual profit and sales are more than the standard profits and sales, the variances will be favourable. On the contrary if actual cost is more than the standard cost and actual profit and sales are less than the standard profits and sales, the variances will be unfavourable. The variances are related to efficiency. If variances are favourable, it will show efficiency and if variances are unfavourable it will show inefficiency. The variances may be classified into four categories such as Direct Materials Variances, Direct Labour Variances, Overheads Cost Variances and Sales or Profit Variances.

Direct Material Variances

Direct material variances are also known as material cost variances. The material cost variance is the difference between the standard cost of materials that should have been incurred for manufacturing the actual output and the cost of materials that has been actually incurred. Material Cost Variance comprises of:

(i) Material Price Variance and

(ii) Material Usage Variance:



Material price variance

= (standard price – actual price)*actual quantity

Material usage variance

= (Standard quantity – actual quantity)* standard price

= (Standard quantity for actual production – actual quantity production) * standard price

Labour cost variance

Labour rate variance

= (standard price – actual price)*actual quantity

Labour efficiency variance

= (standard quantity – actual quantity)*standard price

= Standard quantity for actual production – actual quantity used) * standard price

Illustration: 1 ABC Ltd. makes and sells a single product. The company uses a Standard marginal costing system. It plans to produce and sell 1000 units in May 2005. A budget statement is produced as follow: Budgeted income statement for the month ended 31 May 2005

Sales (50*1000)		50000
Less: Variable cost of goods sold		
Direct materials (3*4000)	12000	
Direct labour (5*3000)	15000	
Variable overheads (2*3000)	6000	33000
Budget contribution		17000
Fixed overhead		3000
Budget profit		**14000**

The actual sales and production is 800 units. The actual income statement is shown as follows: Income statement for the month ended 31 May 2005

Sales ($60*800)		48000

Less: Variable cost of goods sold		
Direct materials ($3.2*2400)	12000	
Direct labour ($6*3200)	15000	
Actual Variable overheads	5500	32380
Contribution		15620
Fixed overhead		2600
Net profit		**13020**

Possible Questions (Unit-III)

1. What is mean by standard costing?
2. Define standard costing
3. What are the steps involved in standard costing?
4. Explain the advantages of standard costing
5. What is mean by production and price policy formulation?
6. What is mean by reduction of work?
7. What are the disadvantages of standard costing?
8. Differentiate between standard costing and budgetary control
9. What is mean by variances?
10. How the variance is classified?
11. Explain about labour variance?
12. What is mean by material variance?
13. What is the formula for material price variance?
14. What is the formula for material usage variance?
15. What are the limitations of standard costing?

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Management Accounting (19CMP102)
Unit –III

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
1.	The deviation of the actual cost from the standard cost is known as……………..	Profit	Loss	Variance	invariable	Variance
2.	------ variance is the difference between standard cost of labour and actual cost of labour	Labour cost	Labour rate	Labour efficiency	Idle time	Labour Cost
3.	-------- concerned with the control of expenses	Budgetary control	Standard costing	Marginal costing	Cost Management	Standard costing
4.	_______ is one which tends to vary does with the volume of output.	Fixed cost	Variable cost	Total cost	Average cost	Variable cost
5.	______expenses are those expenses which vary according to the units of production	Fixed	Variable	Semi- variable	Marginal	Variable
6.	_____expenses are those which are partly constant and partly variable	Fixed	Variable	Semi- variable	Marginal	Semi- variable
7.	Standard costing is a __________	technique	procedure	method	system	technique
8.	Standard cost is a _________	Past cost	Future cost	Planned cost	Concurrent cost	Planned cost
9.	______________variance is the difference between the standard cost of materials specified and the actual cost of materials used	Material cost	Material price	Material usage	Material yield	Material cost
10.	Material cost variance may be	Two	Three	Four	Five	Two

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
	classified into ------ groups					
11.	Which department is responsible for material price variance ____________	Sales department	Production department	Finance department	Accounting department	Production department
12.	----- variance arises due to the difference between standard usage and actual usage of material	Material yield	Material usage	Material price	Material mix	Material price
13.	Which department is responsible for labour rate variance?	Sales department	Personal department	Finance department	Accounting department	Personal department
14.	Standard input allows for one unit is divided by standard cost per output unit for variable direct cost input to calculate	Standard price per input unit	Standard price per output unit	Standard cost per input unit	Standard cost per output unit	Standard price per input unit
15.	Quantity of input which is carefully determined is called ___________	Output unit	Input unit	Standard input	Standard output	Standard input
16.	Variance is stated difference between expected performance and the ___________	Revenue planning	Actual results	Marketing results	Cost planning	Actual results
17.	Difference between actual input variance and budgeted input variance is called	Price variance	Actual output price	Budgeted output price	Actual selling price	Price variance
18.	------ variance is the difference between standard cost of labour and actual cost of labour	Labour cost	Labour rate	Labour efficiency	Idle time	Labour Cost
19.	Labour efficiency variance is…………….	Labour mix variance+labour rate variance	Labour rate variance+Labour yield variance	Labour mix variance+Labour yield variance	Labour Cost variance+ Labour rate variance	Labour rate variance+Labour yield variance
20.	When standard costs are used, the amount of detailed record keeping will normally _____________	Reduce	Increase	Fixed	Variable	Reduce

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
21.	If labour time is based on the maximum efficiency, the unit cost will be _____	Higher	Lower	Equal	Zero	Equal
22.	Which of the following statements are true about standard labour time?	Standard labour time indicates the time in hours needed for a specified process	It is standardized on the basis of past experience with no adjustments made for time and motion study	In fixing standard time due allowance should not be given to fatigue and tool setting	The Production manager does not provide any input in setting the labour time standards	Standard labour time indicates the time in hours needed for a specified process
23.	The labour engaged in the making of a product is known as ________	Direct labour	Indirect labour	Temporary labour	Contract Labour	Direct labour
24.	______ is responsible for setting up of materials price standard	Production department	Engineering department	Purchase department	Sales department	Purchase department
25.	While determining material quantity standards, a proper consideration should be assigned to ___________	Normal material wastage	Abnormal material wastage	Wastage	Normal and abnormal material wastage	Normal material wastage
26.	Standard costing committee is responsible for ________	Computation of variances	Linking the deviations with responsibilities	Setting all types of standards	Computation of variances, linking the deviations and setting all types of standards	Computation of variances, linking the deviations and setting all types of standards
27.	Which of the following standards cannot be used for cost control?	Basic Standard	Normal Standard	Variance	Basic and normal standard	Basic and normal standard
28.	_________ is based on past averages adjusted to anticipated	Ideal Standard	Normal Standard	Basic Standard	Perfection Standard	Normal Standard

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
	future changes.					
29.	Basic standard is established for ________	Short period	Current period	Indefinite period	Definite period	Indefinite period
30.	________ requires constant revision according to the real circumstances.	Attainable Standard	Perfection Standard	Ideal Standard	Standard	Attainable Standard
31.	________reflects a level of attainment based on high level efficiency which can be achieved.	Attainable Standard	Expected Standard	Attainable and expected standard	Perfection Standard	Attainable and expected standard
32.	The standard which can be attained under the most favorable conditions possible ___________	Attainable Standard	Ideal Standard	Expected Standard	Perfection Standard	Ideal Standard
33.	________reflects a level of attainment depending on the maximum possible efficiency which may never be achieved.	Attainable Standard	Perfection Standard	Expected Standard	Ideal standard	Perfection Standard
34.	There are ______ types of standard used in the process of establishment of standard costing system.	Five	Four	Three	Two	Two
35.	A cost centre which relates to equipment or to location is known as __________	Impersonal cost centre	Personal cost centre	Local cost centre	Real cost centre	Impersonal cost centre
36.	The process of standard costing ______________	Can be incorporated in accounting routine	Helps in reaching variances from the accounting procedure	Can be incorporated in accounting routine and Helps in reaching variances from the accounting procedure	Cannot be incorporated in accounting routine	Can be incorporated in accounting routine and Helps in reaching variances from the accounting procedure

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
37.	In budgetary control_____ is used whereas in standard costing __________ is used.	Unit concept, Total concept	Total concept, Unit Concept	Marginal concept, Gross concept	Gross concept, Marginal concept	Total concept, Unit Concept
38.	Standard costs are better than historical costs because	Determination of standard costs is economical in terms of money as well as time, they facilitate delegation of responsibility	They help in timely action against extravagances	Determination of standard costs is economical in terms of money as well as time, They facilitate delegation of responsibility and They help in timely action against extravagances	They do not facilitate delegation of responsibility	Determination of standard costs is economical in terms of money as well as time, They facilitate delegation of responsibility and They help in timely action against extravagances
39.	As per J. Batty, Standard Cost represents _______under given conditions.	Anticipated cost	Current cost	Historical cost	Future cost	Anticipated cost
40.	Standard costing is the preparation of standard costs and their comparison with ________ and the analysis of _________.	Marginal costs, Variances	Variances, Marginal costs	Actual costs, Variances	Variances, Actual costs	Actual costs, Variances
41.	____________ can be defined as a system which intends to control the cost of each unit through prior determination of what should be the cost and then its comparison with actual cost.	Standard costing	Absorption costing	Marginal costing	Total costing	Standard costing
42.	Standard costing makes the work of valuation of inventory easier, because inventory is valued at	Original cost	Predetermined price	Market price	Average price	Predetermined price

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
	__________					
43.	Standard costing technique is not ideal for small concerns because it is _________	Too technical	An expenditure technique	Complicated	An income technique	An expenditure technique
44.	The standard costing technique is unsuitable for __________	Trading business	Manufacturing sector	Job order business	Wholesaler	Job order business
45.	Revision of standards cannot be eliminated because of _________	Change in government policy	Change in business condition	Change in management	Change in business	Change in business condition
46.	Estimated costs.________ the purpose of cost control.	Serve	Sometimes serve	Do not serve	Determine	Do not serve
47.	According to _______ standard cost is "a predetermined cost which is calculated from management's standards of efficient operation and the relevant necessary expenditure."	James	ICWA London	ICWAI	Batty	ICWA London
48.	Standard costs are determined on…	Zero base	The basis of trade cycle	Scientific basis	Traditional base	Zero base
49.	In _______ targets are predetermined and actual performances is compared with targets.	Budgetary control	Both Budgetary control and standard costing	Standard costing	Marginal costing	Standard costing
50.	The other name for ideal standard is ________	Theoretical standard	Expected standard	Normal standard	Basic standard	Theoretical standard
51.	The standard which is expected to be achieved during the budget period is called as ________	Basic standard	Expected standard	Normal standard	Standard	Expected standard
52.	Which of the following standard is unaltered over a period of time?	Basic standard	Expected standard	Normal standard	Standard	Expected standard
53.	Which standard is ideal for fixed expenses?	Basic standard	Ideal standard	Normal standard	Expected standard	Basic standard

S.No.	QUESTION	OPTION1	OPTION2	OPTION3	OPTION4	ANSWER
54.	Who will be the coordinator for standards committee?	Chief engineer	General manager	Cost accountant	Finance controller	Cost accountant
55.	The standard cost card shows the details of __	Materials	Labour	Production process	Material, Labour and Production process	Material, Labour and Production process
56.	Standard costing is helping the management in…	Increasing the overall efficiency	Cost reduction	Increasing production efficiency	Increasing sales	Cost reduction
57.	Time and motion study is widely adopted in setting__________ standard.	Material cost	Material price	Labour cost	Overhead	Labour cost
58.	Standard costs are ________	Continuous cost	Normal cost	Past cost	Reasonably attainable cost	Normal cost
59.	Which one is ideal for cost control purpose?	Normal cost	Standard cost	Average cost	Continuous costing	Standard cost
60.	__________ is used to maintain control over business	Variance analysis	Ration analysis	Activity based costing	Target costing	Variance analysis

UNIT IV

SYLLABUS

Marginal Costing and Decision Making – Absorption Versus Variable Costing: Distinctive features and income determination. Cost Volume Profit Analysis, Profit / Volume ratio. Break Even Analysis – Algebraic and Graphic Methods. Angle of Incidence, Margin of Safety, Key Factor, Determination of Cost indifference point.

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, 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
Total cost technique is the practice of charging all cost, both variable and fixed to operations, process or products.	Marginal costing charges only variable cost to products, process, or operations and excludes fixed cost

	entirely.
It values stock at the cost which includes fixed cost also.	It values stock at total variable cost only. This results in higher value of stock under absorption costing than in marginal costing.
It is guided by profit which is the excess of sales over the total costs in solving managerial problems	It focuses its attention on Contribution which is excess of sales over variable cost.
In total cost technique, there is a problem of apportionment of fixed costs which may result in under or over recovery of expenses.	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

1. 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.
2. Both are the techniques of cost analysis and presentation and are used by the management in formulating policies and decision making.

Dissimilarities

1. 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.
2. Entire fixed cost are excluded from costing where as some of the relevant fixed costs may be included in the differential cost analysis.
3. 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.
4. 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 products 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 Production 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. Alternative Methods of Production

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

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 gives 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

Particulars	Rs.
Sales	XXXX
Less: Variable Cost	XXXX
Contribution	XXXX
Less: Fixed Cost	XXXX
Profit / Loss	XXXX

Illustration 1

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

Products

	X	Y	Z
	(Rs)	**(Rs)**	**(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.

Marginal Cost Statement

Products
Products

	X	Y	Z	Total
	(Rs)	(Rs)	(Rs)	(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: Fixed Cost					3000
Net Profit					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 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 indicate as 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 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 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:

1. Increase the volume of sales.
2. Increase the selling price.
3. Reduce fixed cost.
4. Reduce variable cost.
5. Improve sales mix by increasing the sale of products with PV 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 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

P I V 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.

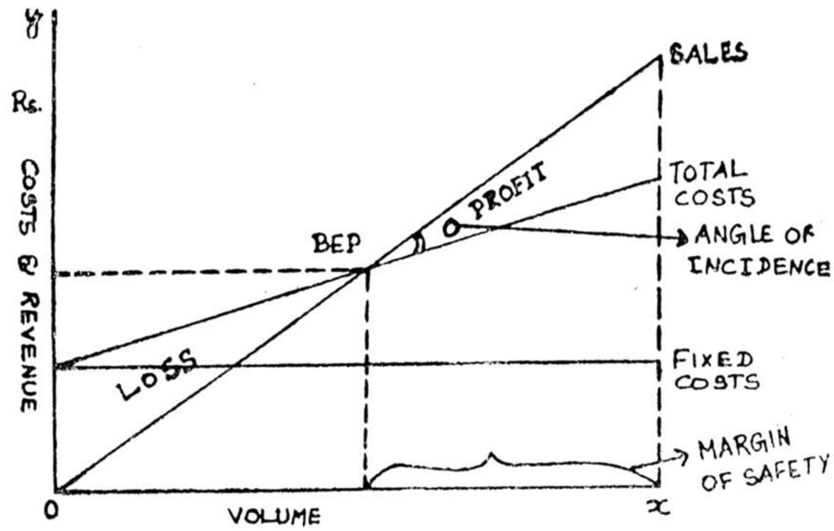
Profit goal:

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

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 seIling 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 fo r 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:

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.

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 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

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KARPAGAM ACADEMY OF HIGHER EDUCATION
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Coimbatore – 641 021.

Management Accounting (19CMP102)
Unit –IV

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
1.	For _______ marginal costing is more helpful to the management.	Planning	co-ordinating	Decision making	Planning and Decision Making	Planning and Decision Making
2.	In ________ costing, only variable items of costs are taken into account.	Standard	Marginal	Working capital	Budgetary control	Marginal
3.	_______ is not allocated to cost unit	Fixed costs	Variable cost	semi-variable cost	semi fixed cost	Variable cost
4.	Marginal cost is _______ as variable cost	Same	Different	Variable	Fixed	Same
5.	The accountant's concept of ______ different from economist's concept of marginal cost.	Total cost	Average cost	Additional cost	Marginal cost	Marginal cost
6.	Economists define marginal cost as the__________ cost of producing one additional unit.	Total cost	Average cost	Additional cost	Marginal cost	Additional cost
7.	Additional unit shall include an element of ____	Fixed cost	Variable cost	Total cost	semi variable cost	Fixed cost
8.	Marginal cost = _________	prime cost – total variable	Total variable cost – prime cost	Prime cost + total variable cost	Prime cost + total fixed cost	Prime cost + total variable cost
9.	Marginal cost = _________	Total cost – fixed cost	Total cost – variable cost	Total cost + fixed cost	Total cost + variable cost	Total cost – fixed cost
10.	Total cost Rs.400, fixed cost Rs. 200 marginal cost =_______	Rs.600	Rs.200	Rs.500	Rs.100	Rs.200
11.	Marginal cost = ______	prime cost	variable cost	work cost	cost of	variable cost

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
					production	
12.	Total cost Rs. 600 fixed cost Rs. 200 marginal cost ______	Rs.100	Rs.200	Rs.800	Rs.400	Rs.400
13.	Total cost Rs.800 fixed cost Rs. 200 marginal cost = ______	Rs.600	Rs.800	Rs.1000	Rs.200	Rs.600
14.	______ is one which tends to be unaffected by variation in volume of output.	Total cost	Average cost	Marginal cost	Fixed cost	Fixed cost
15.	Marginal income or marginal contribution known as the _____	Income or expenses	Income or profit	Income or loss	Expenses or profit	Income or profit
16.	The difference between the contribution and fixed costs is the________	Net profit or loss	Net profit	Gross profit	Net loss	Net profit or loss
17.	Fixed costs remain constant ________of level of activity.	Respective	Irrespective	Contribution	Variable	Irrespective
18.	Sales price and variation cost per unit remain the ______	same	Different	Equal	no change	same
19.	Cost volume profit relationship is fully employed to reveal the state of _______ at various level of activity.	Assets	Liability	Profitability	turnover	Profitability
20.	________ fluctuates from time to time but in the long run marginal cost are stable.	Fixed cost	Variable cost	Total cost	semi fixed cost	Variable cost
21.	_____ remains the same, irrespective of the volume of production.	Total costs	Average costs	Marginal cost	cost of production	Marginal cost
22.	When cost takes into account only variable cost and not the full production cost we will be using __________	Activity based costing	Absorption costing	Full costing	Marginal costing	Marginal costing
23.	The management can take decision regarding ______ and tendering.	Pricing	Planning	co-ordinating	Controlling	Pricing
24.	______ expenses remain unchanged at any level of operation	Fixed	Variable	semi-variable	loss	Fixed
25.	_____expenses are those expenses which vary according to the units of production.	Fixed	Variable	semi-variable	loss	Variable
26.	____expenses are those which are partly constant and	Fixed	Variable	semi-	semi fixed	semi- variable

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
	partly variable.			variable	cost	
27.	The difference between sales value and variable cost is known as	Profit	Contribution	BEP	Fixed cost	Contribution
28.	Contribution=_______	Sales – variable cost	Sales – fixed cost	Sales + variable cost	Sales + Fixed cost	Sales – variable cost
29.	Marginal cost is also known as ______	Period cost	Fixed cost	Volume cost	Prime cost	Volume cost
30.	Fixed cost is also known as ______	Period cost	Total cost	Volume cost	Prime cost	Period cost
31.	______ indicates the relation ship of contribution to sales	P/V ratio	Contribution	Profit	Sales.	P/V ratio
32.	P/v ratio can be improved by _______	Increasimg the selling price	Decreasing selling price	Increasing the variable cost	Increasing the value of sale	Increasimg the selling price
33.	______= sales X P/V ratio.	Sales	Profit	Contribution	Fixed cost	Contribution
34.	Contribution minus profit is equal to________	Sales	Loss	Variable	Fixed cost	Fixed cost
35.	P/V ratio=______	Profit volume ratio	Profit variable ratio	Production volume ratio	Price of production	Profit volume ratio
36.	Limiting factor is also known as ____________	Key factor	Production factors	purchase factor	cost factor	Key factor
37.	The criteria to select a suitable limiting factor is ___________	Highest contribution per unit of limited factor	Highest profit	Highest reduction	Highest cost	Highest contribution per unit of limited factor
38.	_____ is the point at which sales revenue is equal to total cost.	Margin of safety	Break even	Fixed cost	sales	Break even
39.	Break even point in unit can be ascertained by dividing the break even sales value by _______	Profit	P/V ratio	Selling price	Fixed expenses	Selling price
40.	Increase in fixed cost =_______	No effect in BEP	Higher BEP	No effect in P/V ratio	Lower profit	No effect in P/V ratio

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
41.	Decrease in sales volume = ________	No effect in BEP	Higher BEP	No effect in P/V ratio	Lower profit	Lower profit
42.	Increase in variable cost = ________	No effect in bep	Higher BEP	No effect in P/Vratio	Lower profit	No effect in P/V ratio
43.	Decrease in selling price = _________	No effect in BEP	Higher BEP	No effect in P/V ratio	Lower profit	Higher BEP
44.	Decrease in sales volume = _________	No effect in BEP	Higher BEP	No effect in P/V ratio	Lower profit	No effect in BEP
45.	Is the angle at which sales line cuts the total cost line	BEP	Angle of incidence	Contribution	Variable cost	Angle of incidence
46.	If the angle of incidence is _________ it indicates that the profits are being made at higher rate	Large	Small	curve	bend	Large
47.	_________ is the difference between the total sales revenue and the sales at breakeven point.	Actual sales	Margin of safety	Reducing the fixed costs	Increasing fixed cost	Margin of safety
48.	Margin of safety can be improved by ________	Increasing the volume of sales	Decreasing the selling price	Reducing the fixed costs	Reducing the sales	Reducing he fixed costs
49.	_______ margin safety indicates a favorable position of the business.	Large	high sales	Small	Lower profit	Large
50.	Cost volume profit analysis may be applied for ______	Profit planning	ascertaing loss	calculating cost	calculating sales	Profit planning
51.	Marginal cost is the sum of prime cost plus	Fixed cost	Variable cost	Variable overhead	Total cost	Variable overhead
52.	At BEP contribution is equal to ________	Profit	Variable cost	Fixed cost	Sales	Fixed cost
53.	At BEP, profit will be ________	High	Low	Zero	Medium	Zero
54.	Total fixed cost of a company is Rs 21,000 per share ; variable cost per unit is Rs.7 and its selling price per unit is Rs10. BEP in units is equal to _________ units	3000	2100	7000	10,000	7000
55.	P/V ratio of company A is 40% and company B is	Company A	Company B	Can be	Question is	Company B

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
	50% state which company is likely to earn greater profits when the company have heavy demand for the product.			determined	vague	
56.	Margin of safety ratio =_____	Margin of safety/ actual sales	Margin of safety X actual sales	Margin of safety	Margin of safety + actual sales	Margin of safety/ actual sales
57.	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
58.	Changes in profit between the two period Rs.10,000 changes in sales for the above periods rs.40,000 p/v ratio is ________	25%	40%	10%	7%	25%
59.	________ is the difference between the sales and marginal cost.	Fixed cost	Contribution	Profit	Cost	Contribution
60.	When fixed cost is Rs 10,000 and p/v ratio is 50% the break even point will be Rs.____________	20,000	40,000	50,000	90,000	20,000

UNIT V

SYLLABUS

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.

Contemporary Issues : Responsibility Accounting: Concept, Significance, Different Responsibility Centres, Divisional Performance Measurement: Financial and Non-Financial measures. Transfer Pricing

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

Particulars	Rs.	Rs.

		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 current assets and current liabilities are shown through the schedule of changes in working capital.	In cash flow statement changes in current assets and current liabilities are shown in the cash flow statement itself.
5	End Result	Funds flow statement	Cash flow statement shows the

S.No.	Basis of Difference	Fund Flow Statement	Cash Flow Statement
		shows the causes of changes in net working capital.	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

RESPONSIBILITY ACCOUNTING

Meaning

The systems of costing like standard costing and budgetary control are useful to management for controlling the costs. In those systems the emphasis is on the devices of control and not on those who use such devices. Responsibility Accounting is a system of control where responsibility is assigned for the control of costs. The persons are made responsible for the control of costs.

Proper authority is given to the persons so that they are able to keep up their performance. In case the performance is not according to the predetermined standards then the persons who are assigned this duty will be personally responsible for it. In responsibility accounting the emphasis is on men rather than on systems

For example, if Mr. A, the manager of a department, prepares the cost budget of his department, then he will be made responsible for keeping the budgets under control. A will be supplied with full information of costs incurred by his department. In case the costs are more than the budgeted costs, then A will try to find out reasons and take necessary corrective measures. A will be personally responsible for the performance of his department.

Definition

Charles, T. Horngreen: “Responsibility accounting is a system of accounting that recognizes various responsibility centres throughout the organisation and reflects the plans and actions of each of these centres by assigning particular revenues and costs to the one having the pertinent responsibility. It is also called profitability accounting and activity accounting”. According to this definition, the organisation is divided into various responsibility centres and each centre is responsible for its costs. The performance of each responsibility centre is regularly measured.

"Responsibility accounting is that type of management accounting that collects and reports both planned actual accounting information in terms of responsibility centres". The emphasis in this definition is on setting the objectives of responsibility centres and then recording the actual performance so that the persons in-charge of various activities are able to assess their performance.

FEATURES OF RESPONSIBILITY ACCOUNTING

1. Inputs and Outputs or Costs and Revenues:

The implementation and maintenance of responsibility accounting system is based upon information relating to inputs and outputs. The physical resources utilized in an organisation; such as quantity of raw material used and labour hours consumed, are termed as inputs. These inputs expressed in the monetary terms are known as costs. Similarly outputs expressed in monetary terms are called revenues. Thus, responsibility accounting is based on cost and revenue information.

2. Planned and Actual Information or Use of Budgeting:

Effective responsibility accounting requires both planned and actual financial information. It is not only the historical cost and revenue data but also the planned future data which is essential for the implementation of responsibility accounting system. It is through budgets that responsibility for implementing the plans is communicated to each level of management. The use of fixed budgets, flexible budgets and profit planning are all incorporated into one overall system of responsibility accounting.

3. Identification of Responsibility Centres:

The whole concept of responsibility accounting is focused around identification of responsibility centres. The responsibility centres represent the sphere of authority or decision points in an organisation. In a small firm, one individual or a small group of individuals, who are usually the owners may possibly manage or control the entire organisation.

However, for effective control, a large firm is, usually, divided into meaningful segments, departments or divisions. These sub- units or divisions of organisation are called responsibility centres. A responsibility centre is under the control of an individual who is responsible for the control of activities of that sub-unit of the organisation.

This responsibility centre may be a very small sub-unit of the organisation, as an individual could be made responsible for one machine used in manufacturing operations, or it may be very big division of the organisation, such as a divisional manager could be responsible for achieving a certain level of profit from the division and investment under his control. However, the general guideline is that "the unit of the organisation should be separable and identifiable for operating purposes and its performance measurement possible".

4. Relationship between Organisation Structure and Responsibility Accounting System:

A sound organisation structures with clear-cut lines of authority—responsibility relationships are a prerequisite for establishing a successful responsibility accounting system. Further, responsibility accounting system must be so designed as to suit the organisation structure of the organisation. It must be founded upon the existing authority- responsibility relationships in the organisation. In fact, responsibility accounting system should parallel the organisation structure and provide financial information to evaluate actual results of each individual responsible for a function.

5. Assigning Costs to Individuals and Limiting their Efforts to Controllable Costs:

After identifying responsibility centres and establishing authority-responsibility relationships, responsibility accounting system involves assigning of costs and revenues to individuals. Only those costs and revenues over which an individual has a definite control can be assigned to him for evaluating his performance.

Responsibility accounting has an appeal because it distinguishes between controllable and uncontrollable costs. Unlike traditional accounting where costs are classified and accumulated according to function such as manufacturing cost or selling and distribution cost, etc. or according to products, responsibility accounting classifies accumulated costs according to controllability.

'Controllable costs' are those costs which can be controlled or influenced by a specified person or a level of management of an undertaking. Costs which cannot be so controlled or influenced by the action of a specified individual of an undertaking are known as 'uncontrollable costs'. The difference in controllable and uncontrollable costs may only be in relation to a particular person or level of management.

6. Transfer Pricing Policy:

In a large scale enterprise having decentralized divisions, there is a common practice of transferring goods and services from one segment of the organisation to another. In such situations, there is a need to determine the price at which the transfer should take place so that costs and revenues could be properly assigned.

The significance of the transfer price can well be judged from the fact that for the transferring division it will be a source of revenue, whereas for the division to which transfer is made it will be an element of cost. Thus, there is a need of having a proper transfer policy for the successful implementation of responsibility accounting system. There are various transfer pricing methods in use, such as cost price, cost plus normal profit, incremental cost basis, negotiated price, standard price, etc. These methods of intra-company transfers have been discussed in detail later in this chapter.

7. Performance Reporting:

As stated earlier, responsibility account is a control device. A control system to be effective should be such that deviations from the plans must be reported at the earliest so as to take corrective action for the future. The deviations can be known only when performance is reported. Thus, responsibility accounting system is focused on performance reports also known as 'responsibility reports', prepared for each responsibility unit. Unlike authority which flows from top to bottom, reporting flows from bottom to top. These reports should be addressed to appropriate persons in respective responsibility centres.

The reports should contain information in comparative form as to show plans (budgets) and the actual performance and should give details of variances which are related to that centre. The variances which are not controllable at a particular responsibility centre should also be mentioned separately in the report. To be effective, the reports should be clear and simple. Use of diagrams, charts, illustrations, graphs and tables may be made to make them attractive and easily understandable.

8. Participative Management:

The function of responsibility accounting system becomes more effective if participative or democratic style of management is followed, wherein, the plans are laid or budgets/ standards are fixed according to the mutual consent and the decisions reached after consulting the subordinates. It provides motivation to the workers by ensuring their participation and self imposed goals.

9. Management by Exception:

It is a well accepted fact that at successive higher levels of management in the organisational chain less and less time is devoted to control and more and more to planning. Thus, an effective responsibility accounting system must provide for management by exception, i.e., it should focus attention of the management on significant deviations and not burden them with all kinds of routine matters, rather condensed reports requiring their attention must be sent to them particularly at higher levels of management.

10. Human Aspect of Responsibility Accounting:

'The aim of responsibility accounting is not to place blame. Instead it is to evaluate the performance and provide feedback so that future operations can be improved'. Goals and objectives are achieved through people and, hence, responsibility accounting system should motivate people. It should be used in positive sense. It should not be taken as a device to punish subordinates.

It should rather help in improving their performance. Subordinates sometimes dislike control because they take them as restraints. The best responsibility accounting system enlightens employees about the positive side of control. To ensure the success of responsibility accounting system, it must look into the human aspect also by considering needs of subordinates, developing mutual interests, providing information about control measures and adjusting according to requirements.

TRANSFER PRICING

Large organizations are divided into a number of divisions to facilitate managerial control. The problem of transfer pricing arises when one division of the organization transfers its output to another division as an input. A **transfer price** is the price one segment (sub unit, department, division etc.) of an organization charges for a product or service supplied to another segment of the same organization. The transfer from one segment to another is only an internal transfer and not a sale.

Transfer pricing is needed to monitor the flow of goods and services among the divisions of a company and to facilitate divisional performance measurement. The main use of transfer pricing is to measure the notional sales of one division to another division. Thus the transfer prices used in the organization will have a significant effect on the performance evaluation of the various divisions. This requires that the system of transfer pricing should be objective and equitable. **Transfer pricing** becomes necessary when there are internal transfers of goods or services and it is required to appraise the separate performances of the divisions or departments involved.

Transfer pricing is the process of determining the price at which goods are transferred from one profit center to another profit center within the same company. If profit centers are to be used, transfer prices become necessary in order to determine the separate performances of both the 'buying' and 'selling' profit centers. If transfer prices are set too high, the selling center will be favored whereas if set too low the buying center will receive an unwarranted proportion of the profits.

FEATURES OF TRANSFER PRICING

- Goal congruence. The transfer price should be in the best interest of the company overall. The decisions made by each profit centre manager should be consistent with the objectives of the company as a whole. Encourage divisions to make decisions which maximize group profits.
- Fairness. The divisions must perceive the transfer price to be fair since the transfer price will impact divisional profit and hence performance evaluation
- Autonomy. The system used to set the transfer price should seek to maintain the autonomy of the divisional mangers. This autonomy will improve managerial motivation

- Bookkeeping. (Recording the movement). The transfer price chosen should make it straightforward to record the movement of goods or services between divisions
- Minimize global tax liability. Multinational companies can use their transfer pricing policies to move profits around the word and thereby minimize their global tax liability. Management should be aware of the fact that anti-avoidance legislation exists to prevent companies using TP policies to divert profits to subsidiaries based abroad.

In principle a transfer price should match either what the seller would charge an independent, arm's length customer, or what the buyer would pay an independent, arm's length supplier. While unrealistic transfer prices do not affect the overall enterprise directly, they become a concern when they are misused to lower profits in a division of an enterprise that is located in a country that levies high taxes and raise profits in a country that is a tax haven that levies no or low taxes. Transfer pricing is the major tool for corporate tax avoidance.

* * * * *

Possible Questions (Unit-V)

1. What is mean by budget?
2. Define budget
3. What are the objectives of budget?
4. What is mean by planning?
5. What is mean by controlling and coordination?
6. What are the essentials of good budget
7. What are the classifications of budget?
8. Explain purchase budget
9. Explain the sales budget
10. What is mean by master budget?
11. How the cash budget is prepared?
12. Define budgetary control
13. What are the advantages of budgetary control?
14. What are the budgetary control techniques?
15. How the budget is forecasted?
16. What are the steps in budgetary control?
17. Explain the limitation of budgetary control?

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Management Accounting (19CMP102)
Unit –V

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
1.	Budgetary control is a _______ of costing.	Branch	Technique	Batch	Set	Technique
2.	The process of preparing a budget is known as _____________	Budget	Budgeting	Budgetary control	costing	Budgeting
3.	Budgetary control and budgets are the _______	same	Different	Vertical	Horizontal	same
4.	Budgetary control relates to a ________	Persons	product	Cost	income statement, balance sheet and additional data	Persons
5.	Both budgetary control and _______ systems are interrelated.	Marginal costing	Standard costing	Budgeting	Variance	Standard costing
6.	The ________ is the document which lays down the details of the budgeting organization and procedures.	Budget manual	Budget committee	Budget procedure	Budget period	Budget manual
7.	The period covered by a budget is known as _____	Budget committee	Budget period	Budget manual	Budget procedure	Budget period
8.	Generally the budget period is _____	two years	three years	one year	five years	one year
9.	In most of the companies, the key factor is __________	Production	Finance	Sales	Cost	Sales
10.	________ budget is one among the functional budgets.	Sales	Production	Purchase	Cash	Sales
11.	_______ budget is concerned with estimating the probable Output of each product in the forth	Sales	Production	Cash	Purchase	Production

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
	coming budget period					
12.	_____ refers to the quantity of work that can be performed in one hour.	Standard quantity	Standard hour	Actual hour	Actual quantity	Standard hour
13.	Zero base budgeting overcomes the weakness of _______	Conventional budgeting	Sales budget	Production budget	Master budget	Conventional budgeting
14.	A master budget is also known as _______ all functional budgets.	Summary	Production	Sales	Finance	Summary
15.	A fixed budget is useful only when the actual level of activity corresponds to the ______ levels of activity.	Actual	Budgeted	Manual	Financial	Budgeted
16.	A_______ is a department or section of the organisation defined for the purpose of budgetary control.	Budget committee	Budget centre	Budget manual	Budgeting	Budget centre
17.	_____will influence the effects of all other budgets.	Key factor	Production	Sales	Finance	Key factor
18.	A _______ budget is one which is established for use unaltered over a long period of time	Basic	Current	Sales	Production budget	Basic
19.	________ is a plan of estimated receipts and payment of cash for the budget period	Cash budget	Sales budget	Production budget	Purchase budget	Cash budget
20.	_______ budget is one which incorporate all functional budgets.	Master	Flexible	Sales	Finance	Master
21.	________ budget is a budget which is designed to change in accordance with the level of activity actually attained.	Master	Flexible	Fixed	Sales	Flexible
22.	_______ budget is a budget which is designed to remain unchanged irrespective of the level of activity actually attained.	Master	Flexible	Fixed	Sales	Fixed
23.	The difference between the budgeted figures and actual figures is ___	Variance	Profit	Sales	Cost	Variance
24.	______ ratio gives the percentage of actual hours worked to the budgeted hours.	Capacity	Efficiency	Activity	cost	Capacity
25.	Sales budget is a _______	functional budget	Expenditure	Master budget	Cost budget	functional

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
			budget			budget
26.	The difference in fixed cost and variable cost is a special significance in the preparation of ____	Cash budget	Static budget	Flexible budget	Master budget	Flexible budget
27.	The budget which is prepared first of all is _______	Budget for key factor	Cash budget	Master budget	Flexible budget	Budget for key factor
28.	A budge manual contains a summary of _______	All financial budgets	Ratio	The responsibility of the persons engaged in the routine of and the forms and records required for budgetary control.	Flexible budget	The responsibility of the persons engaged in the routine of and the forms and records required for budgetary control.
29.	Key factor is also known as ___ factor	principal	Limiting	Governing	covering	principal
30.	The budgets are proper for a given level of activity, the budget is prepared before the beginning of a financial year is _________	Flexible	Fixed	Sales	Master	Flexible
31.	A factor which influences all other budget	Limiting factor	Production factor	Main factor	Cost factor	Limiting factor
32.	_____ budget is a plan of estimated receipts and payments of cash for the budget period.	Cash	Sales	Production	Raw material	Production
33.	Before the implementation of the master budget it must be approved by the _________	Budget committee	Board of directors	Share holders	Government	Budget committee
34.	Both budgetary control and _______ systems are inter related .	Marginal costing	Budgeting	Standard costing	Process costing	Budgeting
35.	________ is based on prospective approach	Performance budgeting	Flexible budgeting	Zero base budgeting	Functional budget	Performance budgeting

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
36.	Zero base budgeting technique was first used in America in the year __	1960	1962	1968	1970	1962
37.	Zero base budgeting was originally developed by _________	Peter A. Pyre	Brown & Howard	ICMA	ICSI	Peter A. Pyre
38.	Ratios which are used to compare, to control and to appraise the operations of the management are known as ___	Control ratios	Current ratios	p/v ratio	profit ratios	Control ratios
39.	Budgetary control is a system which uses budget as a means of _________ and controlling.	Planning	Staffing	Co-Ordination	Organizing	Planning
40.	A budget is a plan of action for a ________ period.	Previous	Future	current year	past years	Future
41.	A budget guides every manager in the process.	Planning	Staffing	Organizing	Decision making	Decision making
42.	In budgetary control ____ costs are recorded	Actual	Variable	Fixed	Expected	Actual
43.	Budgeted costs are compared with_________	Actual costs	Variable costs	Fixed costs	Expected	Actual costs
44.	Activities of various departments are ________	Planned	Organized	Co-ordinated	Controlled	Co-ordinated
45.	The ________ of a business must be defined clearly	Objectives	Delegation	Co-Operation	Flexibility	Objectives
46.	Budgeting must have the complete _______ of the top management.	Objectives	Delegation	Co-Operation	Flexibility.	Co-Operation
47.	Employee should be educated about the merits of _____ systems.	Budgeting	Budgetary control	Budget	Cost	Budgetary control
48.	The employees must be ________ to improve their efficiency.	Motivation	Reporting	Follow up action	Cost of operation	Motivation
49.	A good budgetary control system should include _____	Motivation	Reporting	Follow up action	Cost of operation	Follow up action
50.	The __________ of budgetary control system should be considered	Motivation	Reporting	Follow up action	Cost of operation	Cost of operation
51.	A good organization must be developed in order to achieve ____ benefits.	Maximum	Minimum	limited	unlimited	Maximum
52.	The ________ must should not be an expensive one.	Motivation	Reporting	Follow up action	Cost of operation	Cost of operation
53.	A ________ may be a department or section of a	Budgetary control	Budges	Budget manual	Cost Centre	Cost Centre

S.No.	QUESTION	Option - I	Option - II	Option - III	Option - IV	ANSWER
	department or any other part of the department.		centers			
54.	Budgets centers is also necessary for ________purpose	Control	Co-ordinate	Motivate	Organize	Control
55.	The head or a budgetary control organisation is designed as the________	Budgetary control	Budges centers	Budget officer	Budget manual	Budget officer
56.	_______ is a written record.	Budgetary control	Budges centers	Budget officer	Budget manual	Budget manual
57.	The budget officer is assisted by a ________	Budgetary control	Budges centers	Budget committee	Budget period	Budget committee
58.	The _____ may be short term or long term.	Budgetary control	Budget centers	Budget committee	Budget period	Budget period
59.	Production budget =	Budgeted sales + Opening stock - Closing stock	Opening stock - Sales + Closing Stock	Opening Stock+ Closing Stock- Sales	Opening Stock + Closing Stock	Budgeted sales + Opening stock - Closing stock
60.	Purchase budget is a __________ budget	Fixed budget	Flexible budgeting	function budget	Cost budget	Functional Budget