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STUDY MATERIAL

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Management Accounting

Management accounting is the provision of financial and non-financial decision-making information to managers. In management accounting or managerial accounting, managers use the provisions of accounting information to inform themselves better before they decide matters within their organizations, which allows them to manage better and perform control functions.

The part of accounting that helps managers in making decisions providing accounting information is called management accounting.

Management accounting is a special branch of accounting. It is a modern and scientific innovation of accounting. Management accounting is accounting for effective management.

Meaning and Definition of Management Accounting

Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of information that assists executives in fulfilling organizational objectives.

It helps the management to perform all its functions, including planning, organizing, staffing, direction, and control. In other words, the field of accounting that provides economic and financial information for managers and other internal users is called management accounting.

Some beautiful definitions of management accounting are mentioned below:

The Institute of Chartered Accountants of England and Wales defines, "Management Accouaung is that form of accounting which enables a business to be conducted more efficiently."

According to R. N. Anthony, "Management Accounting is concerned with accounting information that is useful to management."

Professor J Batty defines, "It is the term used to describe the accounting methods, systems, and techniques, which, coupled with special knowledge and ability, assist management in its task of maximizing profits or minimizing losses."

The Institute of Cost and Management Accountants London has defined, "Management Accounting as the application of professional knowledge and skill in the preparation of accounting information in such a way as to assist management in the formulation of policies and the planning control of the operation of the undertakings."

Similarly, according to the American Accounting Association, "It includes the methods and concepts necessary for effective planning for choosing among alternative business actions and for control through the evaluation and interpretation of performances.

From the above definitions, we can say that the part of accounting that provides information to the managers for use in planning, controlling operations, and decision making is called management accounting.

Characteristics/Nature of Management Accounting

The nature/characteristics of management accounting may be summarized as under:

- Management accounting is a technique of selective nature. It does not use the whole data provided by financial records. It selects and picks up only that information form different financial records (such as profit and loss account or balance sheet), which are relevant and useful to the management to arrive at important decisions on different aspects of the business.
- Management accounting is concerned with the future. It collects and analyses data to plan the future. The primary function of management is to decide bout the future course of action. Management accounting, with the help of different techniques, formats the future course of action.
- Management Accounting makes available useful information which helps the management in planning and decision-making. It can only provide information but cannot proscribe. It is up

to management to what extent it. It can make use of the information depending upon its efficiency and wisdom.

- Management accounting studies the relation between causes and effects. Financial accounting does and analyses the causes responsible for profits or losses. Management accounting attempts to study the cause-and-effect relationship by analyzing the different variables affecting the profits and profitability of the business.
- Management accounting is no bound by the rules of financial accounting. Financial accounting procedures are designed based on GAAPs.

Functions of Management Accounting

The basic function of management accounting is to assist the management in performing its functions effectively. The functions of the management are planning, organizing, directing, and controlling.

Management accounting is a part of accounting. It has developed out of the need for making more use of accounting for making managerial decisions.

Management accounting helps in the performance of each of these functions in the following ways:

1. **Provides data**

Management accounting serves as a vital source of data for management planning. The accounts and documents are a repository of a vast quantity of data about the past progress of the enterprise, which is a must for making forecasts for the future.

2. **Modifies data**

Management accounting modifies the available accounting data rearranging in such a way that it becomes useful for management.

The modification of data in similar groups makes the data more useful and understandable. The accounting data required for management decisions is properly compiled and classifies.

For example, purchase figures for different months may be classified to know total purchases made during each period product-wise, supplier-wise, and territory-wise.

3. **Communication**

Management accounting is an important medium of communication. Different levels of management (top, middle, and lower) need different types of information.

The top management needs concise information at relatively long intervals, middle management needs information regularly, and lower management is interested in detailed information at short-intervals.

Management accounting establishes communication within the organization and with the outside world.

4. **Analyses and interprets data**

The accounting data is analyzed meaningfully for effective planning and decision-making. For this purpose, the data is presented in a comparative form, Ratios are calculated, and likely trends are projected.

5. **Serves as a means of communicating**

Management accounting provides a means of communicating management plans upward, downward, and outward through the organization.

Initially, it means identifying the feasibility and consistency of the various segments of the plan. The later stages it keeps all parties informed about the plans they have been agreed upon and their roles in these plans.

6. **Facilitates control**

Management accounting helps in translating given objectives and strategy into specified goals for attainment t by a specified time and secures the effective accomplishment of these goals efficiently. All this is made possible through budgetary control and standard costing, which is an integral part of management accounting.

7. **Uses also qualitative information**

Management accounting does not restrict itself to financial data for helping the management in decision making but also uses such information that may be capable of being measured in monetary terms. Such information may be collected from special surveys, statistical compilations, engineering records, etc.

8. **To assist in planning.**

Management Accounting assists the management in planning as well as to formulate policies by making forecasts about the production, selling the inflow and outflow of cash, etc.

Not only that, but it may also forecast how much may be needed from alternative courses of action or the expected rate of return from that place and at the same time decides upon the programmed of activities to be undertaken.

9. **To assist in organizing.**

By preparing budgets and ascertaining specific cost centers, it delivers the resources to each center and delegates the respective responsibilities to ensure their proper utilization.

As a result, an interrelationship grows among the different parts of the enterprise.

10. **Decision-Making**

Management accounting furnishes accounting data and statistical information required for the decision-making process, which vitally affects the survival and the success of the business.

Management accounting supplies analytical information regarding various alternatives, and the choice of management is made easy.

11. **To assist in motivation.**

By setting goals, planning the best and economic courses of action, and also by measuring the performances of the employees, it tries to increase their efficiency and, ultimately, motivate the organization as a whole.

12. **To Coordinate**

It helps the management in coordination the whole activities of the enterprise, firstly by preparing the functional budgets, then co-coordinating the whole activities of the enterprise, firstly, by preparing the functional budgets, then co-coordinating the whole activities by integrating all functional budgets into one which goes by the name of 'Master Budget.'

In this way, it helps the management by con-coordinating the different parts of the enterprise. Besides, overall coordination is not at all possible without budgetary control.'

13. **To Control**

The actual work done can be compared with 'Standards' to enable the management to control the performances effectively.

Purpose and Objectives of Management Accounting

The primary objective of Management Accounting is to enable the management to maximize profits or minimize losses.

The fundamental objective of management accounting provides information to the managers for use in planning, controlling operations, and decision making.

Main purpose and objectives of management accounting may be summarized as under:

1. **Uses of Information**

The primary functions of management are the uses of information. It presents accounting information in a form that enables the management, investors, and creditors to analyze the financial statements.

2. **Planning and Policy Formulation**

Planning is deciding in advance what is to be done. It helps the management of ineffective planning. It provides costing and statistical data to be utilized in setting goals and formulating future policies.

3. **Decision Making**

Decision making is defined as the selection of a course of action from among alternatives. It helps the management in decision-making. It uses accounting data to solve various management problems.

Management accounting techniques like cost-volume-profit analysis, standard costing, budgetary control, capital budgeting, funds flow analysis, etc. Assist the management in arriving at the correct decision.

4. **Motivating**

Motivation means individuals need, desires, and concepts that cause him or her to act in a particular manner. Delegation serves as a motivation device because it increases the job satisfaction of employees and encourages them to look forward.

By setting goals, planning the best and economic courses of action, and also by measuring the performances of the employees, it tries to increase their efficiency and, ultimately, motivate the organization as a whole.

5. **Controlling**

Management accounting **helps management in controlling the performance of the organization**. Actual performance is compared with operating plans, standards, and budgets, and deviations are reported to the management so that corrective measures may be taken.

6. **Coordinating Operations**

It helps the management in controlling the performance of the organization.

Actual performance is compared with operating plans, standards, and budgets, and deviations are reported to the management so that corrective measures may be taken.

7. **Reporting**

One of the primary objectives of management accounting is to keep the management fully informed about the latest positions of the concern. The facilitates management to take proper and timely decisions.

The object of management accounting is to provide data. It presents the different alternative plans before the management in a comparative manner. The performance of various departments is also regularly communicated to the top management.

8. **Help in Organizing**

Organizing is the process of allocating and arranging human and nonhuman resources so that plans can be carried out successfully.

Tools or Techniques of Management Accounting

Management Accountant applies many of the financial and cost accounting systems, as techniques, to assist the management. Management accounting is concerned with accounting information that is useful to management.

Management accounting, like accounting, as an accounting service to management through its .various functions, has to employ several tools, techniques, and methods. Now one technique can satisfy managerial needs.

These are placed here in brief to have some idea about those.

1. **Financial Planning**

A business requires finance. Financial planning involves determining both long-term and short-term financing objectives of the firm. Every firm has to decide on the sources of raising funds.

The funds can be raised either through the issue of share capital or through raising loans. Again a decision is to be taken about the type of capital, equity share capital, or preference share capital.

When it decides to raise funds through loans, management is to decide the extent of borrowing, long-term, or short term. All these decisions are important for financing planning.

2. **Budgetary Control**

There are a number of the device which help in controlling. The most widely used device for management control is “Budget.”

Budgetary control is a system that resorts to budget as a means of planning and controlling and coordinating different types of activities, like the production and distribution of goods and services as designed.

3. **Marginal Costing**

Marginal costing is helpful for the measurement of profitability of different lines of production. This technique helps in identifying the nature of costs like marginal costs (variable) and fixed costs.
This is a method of costing which is concerned with changes in costs resulting from changes in the volume of production.

4. **Historical Cost Accounting**

The statement of actual costs after they have been incurred is called Historical cost accounting.
Historical cost accounting is a system of accounting that records all transactions at costs incurred as soon as they take place or on a date immediately after their occurrence.

5. **Decision Accounting**

One of the most important functions of top management is to make decisions. **Decision making involves a choice from several alternatives**.
The decision is taken after studying the alternative data in terms of costs, prices, and profits furnished by management accounting and exercising the best choice after considering other non-financial factors. The objective is to maximize profit through the use of the best alternative method.
The management accounting uses Marginal Costing techniques, Capital Expenditure Budget, and separation of production costs to achieve this end.

6. **Standard Costing**

Standard costing is an important tool of cost control, which is one of the main objectives of management accounting.
Standard costing techniques compare the standard costs of materials, labor, and expenses incidental to production, which is predetermined, with the actual costs that have occurred in the course of carrying out production.
It is the most effective technique available for controlling performances and costs.

7. **Analysis of Financial Statement**

The technique of **financial analysis includes comparative financial statements**, ratios, fund flow statements, Cash flow statements, and comparative financial statement analysis tools to management for decision making.
The financial statements reveal the past performances of business in respect of dividend-paying capacity, nature of debts services, profit-earning capacity, and solvency position.
Based on these past events, the future course of action is projected.

8. **Revaluation Accounting**

This is an important tool for management accounting.
Revaluation or Replacement accounting revere to the maintenance of capital in real terms. This term is used to denote the methods employed for overcoming the problems connect with fixed asset replacement in a period of rising prices.
It is a fact that a problem arises in connection with the replacement of fixed assets in terms of rising prices. It ensures the maintenance of the capital of the firm.

9. **Control Accounting**

It is not a separate accounting system. It consists of techniques of standard costing, budgetary control, control reports and statement, internal check, internal audit, and reports.
It is in this field that the management has scope to display ingenuity in the' analysis, interpretation, and presentation of information at all levels of management.

10. **Management Information System**

It has already been stated that the management accounting of an enterprise is to provide management and other operations as a basis of protective and constructive to management.
The management accountant provides all these data and information relevant to the enterprise for the purpose.
With the development of electronic devices for recording and classifying data, reporting to management has considerably improved. Feed-back of information can be used as control techniques.

11. **Statistical Techniques**

There is a large number of statistical and graphical techniques that are used in management accounting. Some common examples are the master chart, chart of sales and earnings, investment chart, etc.

12. Ratio Accounting

Ratio accounting signifies the technique and methodology of analysis and interpretation of financial statements using accounting ratios derived from such statements.

Ratio accounting included trend analysis, comparative financial statements, ratio analysis, fund flow statements, etc.

Limitations of Management Accounting

Though management accounting in helpful too to the management as it provides information for planning, controlling, and decision making.

Still, its effectiveness is limited by several reasons. Management Accounting is a recent discipline, and therefore, it is in the process of development.

Hence, it suffers from all the limitations of a new discipline. Some of the limitations of management accounting follow:

1. **Management Accounting is only a tool.**

Management accounting should never be considered as an alternative or substitute for management. The tools and techniques of management accounting provide only information and not decisions.

Decisions are to be taken by management, and implementation of decisions is also done by management.

2. **Evolutionary' Stage**

Management accounting is still in its initial stage. Management accounting is only in a developmental stage that has not reached the final stage.

The techniques and tools used by this system give varying and deferring results.

3. **Limitations of Basic Records**

Management accounting is mainly concerned with the rearrangement or modification of data. It derives its information from financing accounting, cost accounting, and other records.

The correctness of management accounting depends upon the correctness of these basic records: that is, their limitations are also the; limitations of a management accountant.

4. **Lack of knowledge**

The use of management accounting requires knowledge of several related subjects.

Deficiency in knowledge in related subjects like accounting principles statistics, economics, principles of management, etc. will limit the use of management accounting.

5. **Persistent Efforts**

The conclusions and decisions drawn by the management accountant are not executed automatically. Thus, there is a need for continuous and coordinated efforts of each management level to execute these decisions.

He has to convince people at all levels. In other words, he must be an efficient salesman in selling his ideas.

6. **Intensive Decision**

Decision making based on management accounting that provides scientific analysis of various situations will be a time-consuming one.

As such, management may avoid systematic procedures for making a decision and arrive at a decision using intuitive and intuitive limits the usefulness of management accounting.

7. **Costly Installation**

It is very costly. The installation of a management accounting system needs a very elaborate organization and numerous rules and regulations. This results in heavy investment, which only bill concerns can afford.

8. **Personal Bias**

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

9. **Resistance**

The installation of management accounting involves a basic change in an organizational setup.

New rules and regulations are also required to be framed, which affects many personal, and hence there is a possibility of resistance from some quarters or the other.

10. **Top-heavy Structure**

The installation of a management accounting system requires high costs on account of an elaborate organization and numerous rules and regulations. It can, therefore, be adopted only by big concerns.

11. **Provides Only Data**

The main function of management accounting is to provide data and not decisions. It can only inform, not prescribe.

12. **Broad-Based Scope**

Management accounting has a very wide scope incorporating many disciplines. Management requires information from both accounting as w£fl as nonaccounting sources.

This creates many problems and brings a degree of inexactness and subjectivity in conclusion obtained through it.

13. **Not an alternation to administration**

Management accounting is a tool of management, not an alternative to management. It cannot replace the management or administration.

14. **Opposition to Change**

Management accounting demands a break away from traditional accounting practices.

It calls for a rearrangement of the personal and their activities, which is generally not like by the people involved.

Importance or Roles of Management Accounting in the Decision-Making Process in a Business Organization.

The objective of decision making is to maximize profit through the use of the best alternative method. Management accounting helps management in deciding financial affairs. It uses accounting data to solve various management problems.

Every organization has to decide at the right time. Management accounting played a vital role in the **decision-making process in a business organization**.

he importance/role of management accounting can be stated as follows:

1. **Efficient Planning**

Management accounting plays a vital role in taking an efficient plan providing necessary information.

Through the capital budget, sales budget, Cost-volume-profit analysis, management accountants provide information for making plans.

2. **Increasing Efficiency to Business Operations**

Management accounting also plays an important role in increasing efficiency in business operations through budgeting, ratio analysis, variance analysis, standard costing, etc.

3. **Efficient Control**

Management accounting takes pan inefficient control through JIT philosophy and total quality control system.

4. **Increase Labor Efficiency**

Management accounting helps to increase labor efficiency through standard labor costing, linking bonus with productivity and budgeting.

5. **Achieve Management Efficiency**

Management accounting contributes a lot to increase the management efficiency of the organization providing managers with the correct information.

6. **Help Management Function**

We know that the main functions of management are planning, organizing, leading, and controlling management accounting helps management personnel to perform the functions properly, providing necessary accounting information.

7. **Communicating**

For performing the functions efficiently and effectively, managers need to communicate with the various parties and parts of the organization.

Management accounting helps in this respect preparing various reports.

Last of all, we can say that the activities of management accounting are occurred only to perform a vital role in the decision-making process in an organization.

Scope of Management Accounting

The main aim is to help management in its functions of planning, directing, and controlling.

The scope of management accounting is so wide broad-based that it includes within its fold an analysis of all the aspects of modern accounting, which emphasis the common denominator of the functions of **both management and accounting the making of an effective decision based on appropriate information**.

e following are some of the areas of specialization included within the ambit of management accounting:

1. **Financial Accounting**

Financial accounting is the general accounting which accounting relates to the recording of business transactions in the books of prime entry, posting them into respective ledger accounts, balancing them preparing a trial balance.

Accounting for revenues, expenses, assets, liabilities, and net worth, together with the production of summary financial reports.

Hence management accounting can not obtain full control and coordination of operations without a well designed financial accounting system.

2. **Cost Accounting**

Costing is a branch of accounting.

Accounting for current, standard and prospective costs; analysis and communication of cost data at all levels of management with the organization. It is the process and technique of ascertaining cost. **Planning, decision-making, and control are the basic managerial functions**.

The cost accounting system provides the necessary tools such as standard costing, budgetary control, inventory control, marginal costing, etc. for carrying out such functions efficiently.

3. **Budgeting Forecasting**

Budgeting means expressing the plans, policies, and goals of the enterprise for a definite period in the future.

Assembly and consolidation of budget; assistance to management personnel in translating operating plans into financial budgets; reporting and analysis of budget variances.

Forecasting, on the other hand, is a prediction of what happened as a result of a given set of circumstances. Targets are set for different departments, and responsibility is fixed for achieving these targets.

4. **Data Processing**

Recording accounting data, performing repetitive operations with these data, and preparing reports to form recoded data.

5. **Internal Auditing**

Review and appraisal of accounting procedures and records to ascertain their reliability, conformity to prescribed practices, and adequacy to protect against loss of assets by fraud, waste, and other causes.

Internal audit helps the management in fixing the responsibility of different individuals.

6. **Tax Reporting**

This necessitates the computation of income by the Income Tax Act, preparing return statements and making payment of taxes when due **Income statements are prepared, and tax liabilities are calculated**.

The management is informed about the tax burden from the central Government, State Government, and Local Authorities. This includes the computation of taxable income as per tax law, filing of returns, etc.

7. **Financial Analysis**

Interpretation of accounting reports, analysis in financial terms of proposed projects, plans, and procedures; assistance to the management in interpretation and evaluation of financial data of all types.

8. **Inventory Control**

It includes control over inventory from the time it is acquired until its final disposal.

9. **Revaluation Accounting**

This is concerned with ensuring that capital is maintained intact in real terms, and profit is calculated with this fact in mind.

10. **Statistical Methods**

Graphs, charts, pictorial presentations, index numbers, and other statistical methods make the information more impressive and intelligible.

Other tools, such as time series, regression analysis, sampling technique, etc. are highly useful for planning and forecasting.

11. **Taxation**

This includes the computation of income following the tax laws, filing of returns, and making tax payments.

12. **Method and Procedures**

This includes maintenance of proper data processing and other office management services, reporting on the best use of mechanical and electronic devices.

It provides statistical data to the various departments and undertakes special cost studies, cost estimations, reports on cost-volume-profit relationships, under the changing conditions of the organization.

13. **Interim Reporting**

This includes the preparation of monthly, quarterly, half-yearly income statements and the related reports, cash flow and funds flow statements, scrap reports, etc.

14. **Office Services**

This includes maintenance of proper data processing and other data processing and other office management services, reporting on the best use of mechanical and electronic devices.

15. **Other Services**

This includes maintenance of proper data processing and other office management services, reporting on the best use of mechanical and electronic devices.

Distinctions between Management Accounting and Financial Accounting

Financial accounting and management accounting are closely inter-related since management accounting draws out a major part of the information form financial accounting and modifies the same for managerial use.

Financial accounting ensures that the assets and liabilities of a business are properly accounted for and provides shareholder investors, tax authority, creditors, etc.

On the other hand, management accounting provides information, especially for the use of managers who are responsible for making proper decisions within an organization.

Financial accounting is concerned with the recording of day-to-day transactions of the business.

Though both financial and management accounting relies on the same financial data, there are some differences between financial and management accounting.

Distinctions between Management Accounting and Financial Accounting are the following:

Point of difference	**Management Accounting**	**Financial Accounting**

Users	Management accounting is especially for internal users. Management accounting reports are exclusively used by internal users viz. managers and employees.	Financial accounting is both for internal and external users. Financial accounting reports arc primarily used by external users, such as shareholders, banks, and creditors.
Objective	The objective of management accounting is to assist internal management.	The objective of financial accounting is to assist both internal and external decision-makers.
Uses of GAAP	GAAP is not mandatory to follow in management accounting.	GAAP is mandatory to follow in financial accounting.
Events	It emphasizes decisions on future events.	It emphasizes decisions on past events.
Freedom of choices	No constraints are other than costs about the benefits of improved management decisions.	Constrained by **generally accepted accounting principles (GAAP)**.
Type of Reports	Detailed reports: concern about details of parts of the entity, products, departments, territories, etc.	Summary reports concern primarily with the entity as a whole.
Behavioral implications	Concern about how measurements and reports will influence a manager's daily behavior.	Concern about how to measure and communicate economic phenomena.
Delineation of Activities	The field is less sharply defined—heavier use of economic, decision science, and behavioral sciences.	The field is more sharply defined—lighter use of related disciplines.
Timespan	Flexible, varying from hours to years	Less flexible; usually 1 month to 1 year.
Methodology	In management accounting, cost, and revenue are mostly reported by responsibility centers or profit centers.	Financial accounting records are maintaining in the form of revenue, income and expenditure, and property accounts.

Annual Reporting	Annual reporting of management accounting is not mandatory.	Annual reporting of financial accounting is mandatory.
Characteristics	It holds qualitative characteristics.	It holds quantitative characteristics.
Fundamental quality	Emphasizes relevance.	Emphasizes objectivity and verifiability.
Enhancing Quality	Emphasizes timeliness.	Emphasizes precision.
Rules	It has the managers' own rules.	It has no accountants' own rules.
External vs. Internal	Management accounting system produces information that is used within an organization, by managers and employees.	A financial accounting system produces information that is used by parties external to the organization, such as shareholders, banks, and creditors.
Segment reporting	May pertain to smaller business units or individual departments, in addition to the entire organization.	Pertains to the entire organization or materially significant business units.
Focus	Management accounting focuses on the future and present.	Financial accounting focuses on history.
Format	No specific format is designed for management accounting systems. (Formal and informal recordkeeping)	Financial accounts are supposed to be in accordance with a specific format so that financial accounts of different organizations can be easily compared. (Formal recordkeeping)
Planning and Control	Management accounting helps management to record, plan, and control activities to aid the decisionmaking process.	Financial accounting helps in making investment decisions and in credit rating.
Information	Quantitative and qualitative. Monetary and non-monetary.	Quantitative and monetary.

Reporting frequency and duration.	As needed – daily, weekly, monthly.	Well-defined – annually, semi-annually, quarterly. (Verifiable)
Optional	Preparing financial accounting reports is mandatory, especially for limited companies.	There are no legal requirements to prepare reports on management accounting.
Legal / Rules	Drafted according to management suitability.	Drafted according to GAAP – Generally Accepted Accounting Procedure.
Accounting Process	Cost accounts are not Reserved under Management Accounting. The data from financial statement and cost ledgers are analyzed.	Follows a full process of recording, classifying, and summarizing for analysis and interpretation of the financial information.

Difference between Cost Accounting and Management Accounting

Management accounting and Cost accounting are two important branches of accounting. Both of these branches of accounting help the management in accomplishing their assigned task. Management accounting and cost accounting involves the presentation of accounting information in a manner that facilitates a prudent planning, correct decision-making, and effective controlling of day-to-day operations.

It goes without saying that both the systems overlap each other in some areas of functioning. Most of the **cost accounting concepts are freely used in management accounting for assisting the managemen**t.

Naturally, it is difficult to draw a sharp distinction between the two. Despite this situation, some distinctions which can be identified, are placed in the following manner:

Point of difference	**Management Accounting**	**Cost Accounting**
Objective	The main object of management accounting is to provide information to the managers for use in planning, controlling operations, and decision making.	The main object of cost accounting to determine and control the cost of production.
Accounting system	In management Accounting, no such system is needed for the application.	In Cost Accounting, Double Entry System be applied in case of need.
Guiding principles	Management Accounting has got no Generally Accepted principles. It follows such principles as would be necessary according to the demand for the situation.	Cost Accounting usually follows some specific principles. These are cost concepts and principles for the determination of costs.

Nature	Management accounting is related to future programs, planning, and decision making.	It is based on past and present financial figures.
Rules	It is not necessary to follow Generally accepted accounting principles (GAAP).	**Generally accepted accounting principles (GAAP) are strictly followed in preparing cost statement**.
Unit of measurement	Non-physical units like labor Hours. Machine Hours etc. are also important bases for measurement in both the systems.	Both of these systems of accounting use physical and financial units of measurement.
Functions	The main function of management accounting is to provide data and not decisions. It can only inform, not prescribe.	The main function of cost accounting is to record classify and concentrate costs.
Related	Only top-level management needs management accounting information to make a decision.	Top and mid-level managers are related to cost accounting activity.
Data used	Management accounting uses both quantitative and qualitative information.	Only quantitative aspect is recoded in cost accounting.
Duration of the accounting period	This is because management accounting is to serf the purpose of decision making for a future course of action.	Cost Accounting information are concerned with the current year ignoring future years while management accounting is mainly future-oriented.
Time of prepare	In management accounting system reports can be prepared when it is needed.	Generally, cost statements are prepared at the end of the financial period.
Focal point	In the case of Management Accounting, an individual segment of business comes under the purview. Sometimes the entire business is considered to the principal object of study.	In cost accounting, the cost of production is arrived at based on cost-centers, production departments, and work processes. It does not consider the same from the standpoint of business as a whole.
Users	The users of management accounting are the manger and other internal users.	The users of cost accounting information may be both internal and external.

Scope	In both trading and manufacturing concerns.	In the manufacturing concern.
Rules	It follows the managers' own rules.	It doesn't follow the accountants' own rules.

Budgetary Control System

Meaning:

Budgetary control is the process of determining various actual results with budgeted figures for the enterprise for the future period and standards set then comparing the budgeted figures with the actual performance for calculating variances, if any. First of all, budgets are prepared and then actual results are recorded.

The comparison of budgeted and actual figures will enable the management to find out discrepancies and take remedial measures at a proper time. The budgetary control is a continuous process which helps in planning and co-ordination. It provides a method of control too. A budget is a means and budgetary control is the end-result.

Definitions:

"According to Brown and Howard, "Budgetary control is a system of controlling costs which includes the preparation of budgets, coordinating the departments and establishing responsibilities, comparing actual performance with the budgeted and acting upon results to achieve maximum profitability." Weldon characterizes budgetary control as planning in advance of the various functions of a business so that the business as a whole is controlled.

J. Batty defines it as, "A system which uses budgets as a means of planning and controlling all aspects of producing and/or selling commodities and services. Welsch relates budgetary control with day-to-day control process." According to him, "Budgetary control involves the use of budget and budgetary reports, throughout the period to co-ordinate, evaluate and control day-to-day operations in accordance with the goals specified by the budget."

From the above given definitions it is clear that budgetary control involves the follows:

(a) The objects are set by preparing budgets.

(b) The business is divided into various responsibility centres for preparing various budgets.

(c) The actual figures are recorded.

(d) The budgeted and actual figures are compared for studying the performance of different cost centres.

(e) If actual performance is less than the budgeted norms, a remedial action is taken immediately.

Objectives of Budgetary Control:

Budgetary control is essential for policy planning and control. It also acts an instrument of co-ordination.

The main objectives of budgetary control are the follows:

1. To ensure planning for future by setting up various budgets, the requirements and expected performance of the enterprise are anticipated.
3. To operate various cost centres and departments with efficiency and economy.
4. Elimination of wastes and increase in profitability.
5. To anticipate capital expenditure for future.
6. To centralise the control system.
7. Correction of deviations from the established standards.
8. Fixation of responsibility of various individuals in the organization.

Essentials of Budgetary Control:

There are certain steps which are necessary for the successful implementation budgetary control system.

These are as follows:

1. Organisation for Budgetary Control
2. Budget Centres
3. Budget Mammal
4. Budget Officer
5. Budget Committee
6. Budget Period
7. Determination of Key Factor.

1. Organization for Budgetary Control:

The proper organization is essential for the successful preparation, maintenance and administration of budgets. A Budgetary Committee is formed, which comprises the departmental heads of various departments. All the functional heads are entrusted with the responsibility of ensuring proper implementation of their respective departmental budgets.

The Chief Executive is the overall in-charge of budgetary system. He constitutes a budget committee for preparing realistic budgets A budget officer is the convener of the budget committee who co-ordinates the budgets of different departments. The managers of different departments are made responsible for their departmental budgets.

2. Budget Centres:

A budget centre is that part of the organization for which the budget is prepared. A budget centre may be a department, section of a department or any other part of the department. The establishment of budget centres is essential for covering all parts of the organization. The budget centres are also necessary for cost control purposes. The appraisal performance of different parts of the organization becomes easy when different centres are established.

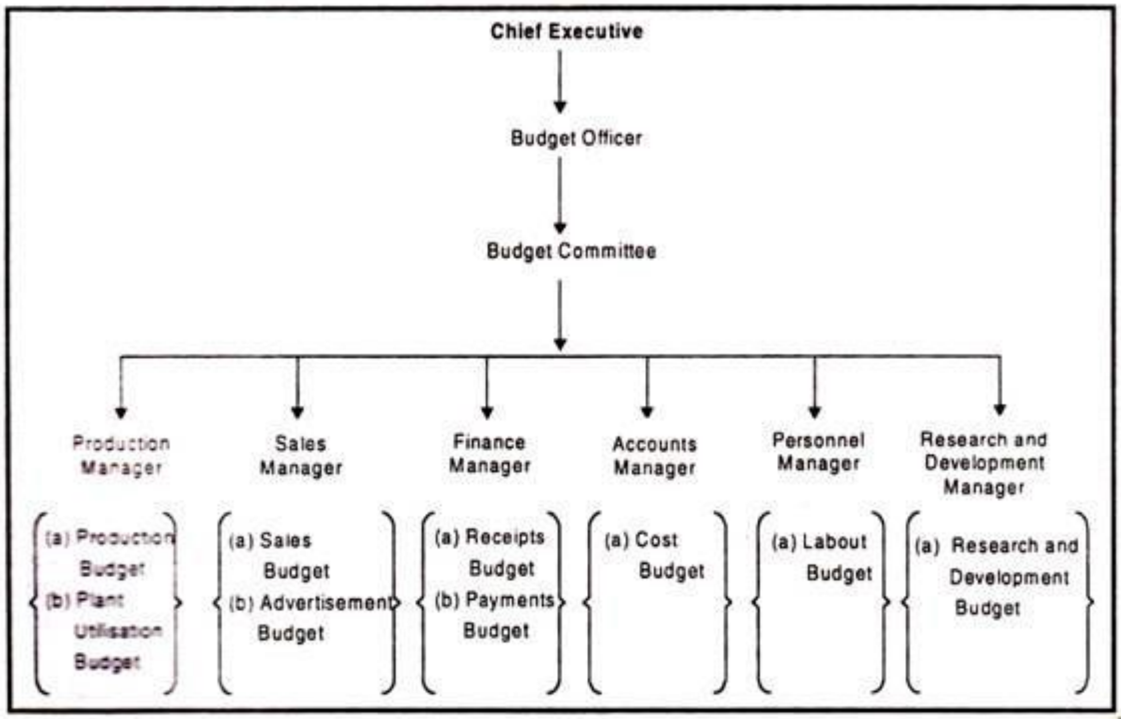
3. Budget Manual:

A budget manual is a document which spells out the duties and also the responsibilities of various executives concerned with the budgets. It specifies the relations amongst various functionaries.

4. Budget Officer:

The Chief Executive, who is at the top of the organization, appoints some person as Budget Officer. The budget officer is empowered to scrutinize the budgets prepared by different functional heads and to make changes in them, if the situations so demand. The actual performance of different departments is communicated to the Budget Officer. He determines the deviations in the budgets and the actual performance and takes necessary steps to rectify the deficiencies, if any.

He works as a coordinator among different departments and monitors the relevant information. He also informs the top management about the performance of different departments. The budget officer will be able to carry out his work fully well only if he is conversant with the working of all the departments.



5. Budget Committee:

In small-scale concerns the accountant is made responsible for preparation and implementation of budgets. In large-scale concerns a committee known as Budget Committee is formed. The heads of all the important departments are made members of this committee. The Committee is responsible for preparation and execution of budgets. The members of this committee put up the case of their respective departments and help the committee to take collective decisions if necessary. The Budget Officer acts as convener of this committee.

6. Budget Period:

A budget period is the length of time for which a budget is prepared and employed. The budget period depends upon a number of factors. It may be different for different industries or even it may be different in the same industry or business.

The budget period depends upon the following considerations:

(a) The type of budget i.e., sales budget, production budget, raw materials purchase budget, capital expenditure budget. A capital expenditure budget may be for a longer period i.e. 3 to 5 years purchase, sale budgets may be for one year.

(b) The nature of demand for the products.

(c) The timings for the availability of the finances.

(d) The economic situation of the country.

(e) The length of trade cycles.

All the above-mentioned factors are taken into account while fixing period of budgets

7. Determination of Key Factor:

The budgets are prepared for all functional areas. These budgets are interdependent and inter-related. A proper co-ordination among different budgets is necessary for making the budgetary control a success. The constraints on some budgets may have an effect on other budgets too. A factor which influences all other budgets is known as Key Factor or Principal Factor.

There may be a limitation on the quantity of goods a concern may sell. In this case, sales will be a key factor and all other budgets will be prepared by keeping in view the amount of goods the concern will be able to sell. The raw material supply may be limited, so production, sales and cash budgets will be decided according to raw materials budget. Similarly, plant capacity may be a key factor if the supply of other factors is easily available.

The key factor may not necessarily remain the same. The raw materials supply may be limited at one time but it may be easily available at another time. The sales may be increased by adding more sales staff, etc. Similarly, other factors may also improve at different times. The key factor also highlights the limitations of the enterprise. This will enable the management to improve the working of those departments where scope for improvement exists.

Advantages of Budgetary Control:

The budgetary control system help in fixing the goals for the organization as whole and concerted efforts are made for its achievements. It enables ‘economies in the enterprise.

Some of the advantages of budgetary control are:

1. Maximization of Profits:

The budgetary control aims at the maximization of profits of the enterprise. To achieve this aim, a proper planning and co ordination of different functions is undertaken. There is a proper control over various capital and revenue expenditures. The resources are put to the best possible use.

2. Co-ordination:

The working of different departments and sectors is properly coordinated. The budgets of different departments have a bearing on one another. The co-ordination of various executives and subordinates is necessary for achieving budgeted targets.

3. Specific Aims:

The plans, policies and goals are decided by the top management. All efforts are put together to reach the common goal, of the organization. Every department is given a target to be achieved. The efforts are directed towards achieving some specific aims. If there is no definite aim then the efforts will be wasted in pursuing different aims.

4. Tool for Measuring Performance:

By providing targets to various departments, budgetary control provides a tool for measuring managerial performance. The budgeted targets are compared to actual results and deviations are determined. The performance of each department is reported to the top management. This system enables the introduction of management by exception.

5. Economy:

The planning of expenditure will be systematic and there will be economy in spending. The finances will be put to optimum use. The benefits derived for the concern will ultimately extend to industry and then to national economy. The national resources will be used economically and wastage will be eliminated.

6. Determining Weaknesses:

The deviations in budgeted and actual performance will enable the determination of weak spots. Efforts are concentrated on those aspects where performance is less than the stipulated.

7. Corrective Action:

The management will be able to take corrective measures whenever there is a discrepancy in performance. The deviations will be regularly reported so that necessary action is taken at the earliest. In the absence of a budgetary control system the deviations can be determined only at the end of the financial period.

8. Consciousness:

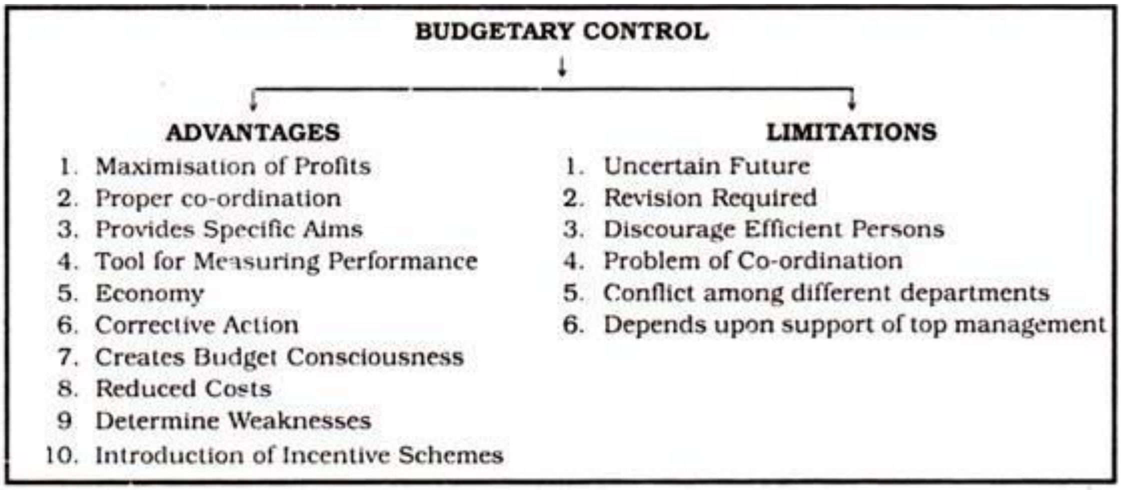
It creates budget consciousness among the employees. By fixing targets for the employees, they are made conscious of their responsibility. Everybody knows what he is expected to do and he continues with his work uninterrupted.

9. Reduces Costs:

In the present day competitive world budgetary control has a significant role to play. Every businessman tries to reduce the cost of production for increasing sales. He tries to have those combinations of products where profitability is more.

10. Introduction of Incentive Schemes:

Budgetary control system also enables the introduction of incentive schemes of remuneration. The comparison of budgeted and actual performance will enable the use of such schemes.



Limitations of Budgetary Control:

Despite of many good points of budgetary control there are some limitations of this system. Some of the limitations are discussed as follows:

1. Uncertain Future:

The budgets are prepared for the future period. Despite best estimates made for the future, the predictions may not always come true. The future is always uncertain and the situation which is presumed to prevail in future may change. The change in future conditions upsets the budgets which have to be prepared on the basis of certain assumptions. The future uncertainties reduce the utility of budgetary control system.

2. Budgetary Revision Required:

Budgets arc prepared on the assumptions that certain conditions will prevail. Because of future uncertainties, assumed conditions may not prevail necessitating the revision of budgetary targets. The frequent revision of targets will reduce the value of budgets and revisions involve huge expenditures too.

3. Discourage Efficient Persons:

Under budgetary control system the targets are given to every person in the organization. The common tendency of people is to achieve the targets only. There may be some efficient persons who can exceed the targets but they will also feel contented by reaching the targets. So budgets may serve as constraints on managerial initiatives.

4. Problem of Co-ordination:

The success of budgetary control depends upon the co-ordination among different departments. The performance of one department affects the results of other departments. To overcome the problem of coordination a Budgetary Officer is needed. Every concern cannot afford to appoint a Budgetary Officer. The lack of co-ordination among different departments results in poor performance.

5. Conflict Among Different Departments:

Budgetary control may lead to conflicts among functional departments. Every departmental head worries for his department goals without thinking of business goal. Every department tries to get maximumallocation of funds and this raises a conflict among different departments.

6. Depends Upon Support of Top Management:

Budgetary control system depends upon the support of top management. The management should be enthusiastic for the success of this system and should give full support for it. If at any time there is a lack of support from top management then this system will collapse.

Problems

FlexibleBudget

(1) PrepareaFlexiblebudgetforoverheadsonthebasisofthefollowingdata.Ascertainthe overheadratesat50%and60%capacity.

Variable overheads:	At60%capacity(Rs)
Indirect Material	6,000
Labour	18,000
Semi- variable overheads:	
Electricity:(40%Fixed&60%variable)	30,000
Repairs:(80%fixed&20%Variable)	3,000
Fixed overheads:	
Depreciation	16,500
Insurance	4,500
Salaries	15,000
Total overheads	93,000
Estimated direct labour hours	1,86,000

Solution:

Flexible Budget

Items	**Capacity**	
	50%	**60%**
Variable overheads:	**Rs.**	**Rs.**
Material	5,000	6,000
Labour	15,000	18,000
Semi- variable		
Electricity	27,000	30,000

Repairs	2,900	3,000
Fixed overheads:		
Deprecation	16,500	16,500
Insurance	4500	4500
Salaries	15,000	15,000
Total Overheads	85,900	93,000
Estimated direct labour hours	1,55,000	1,86,000
Overhead Rate	0.55	0.50

Working Note:

Electricity

At 50% capacity = $\frac{18,000 * 50}{60}$

= Rs. 15,000

Rs. 12,000 + Rs. 15,000 = Rs. 27,000

60% capacity = Rs 18,000 + Rs. 12,000 = Rs. 30,000

Repairs

For 60% capacity = Rs.600

=Rs. 2400 + Rs.600 =Rs.3,000

At 50% capacity : = 600/60 * 50

= RS. 500

=Rs.2400 + 500

=Rs.2,900

(2) Prepareaflexiblebudgetforoverheadsonthebasisofthefollowingdata.Ascertainthe overheadratesat60%and70%capacity.

Variable overheads:	At60%capacity(Rs)
Material	6,000
Labour	18,000
Semi- variable overheads:	
Electricity:	30,000
40% Fixed	
60% variable	
Repairs:	
80% fixed	3,000
20% Variable	3,000
Fixed overheads:	
Depreciation	16,500
Insurance	4,500
Salaries	15,000
Total overheads	93,000
Estimated direct labour hours	1,86,000

Solution:

Working:

Repairs

For60%capacity Fixed80/100*3,000=Rs.2400

Variable = 20/100 * 3,000 = Rs. 600

=Rs. 2400 + Rs.600 =Rs.3,000

Electricity Exp.:

At60%capacity Fixed=40/100*30,000=12,000

Variable=60/100*30,000=18,000

At70%capacity: Fixed=40/100*30,000=Rs.12,000

Variable=18,000/60*70=Rs.21,000

Total Rs.=33,000

Flexible Budget

Items	**Capacity**	
	60%	**70%**
Variable overheads:	**Rs.**	**Rs.**
Material	6,000	7,000
Labour	18,000	21,000
Semi- variable		
Electricity	30,000	33,000
Repairs	3,000	3,100
Fixed overheads:		
Deprecation	16,500	16,500
Insurance	4,500	4,500
Salaries	15,000	15,000
Total Overheads	93,000	1,00,100
Estimated direct labour hours	1,86,000	2,17,000
Overhead Rate	0.50	0.46

(3) Theexpensesbudgetedforproductionof1,000unitsinafactoryarefurnishedbelow:

Particulars	**Per Unit Rs.**
Material Cost	700
Labour Cost	250
Variable overheads	200
Selling expenses (20% fixed)	130
Administrative expenses (Rs. 2,00,000)	200
Total Cost	1,480

Prepareabudgetforproductionof600unitsand800unitsassumingadministrativeexpenses arerigidforalllevelofproduction.

Solution: **FlexibleBudget**

Particulars	**For 600 units**		**For 800 units**	
	Per unit Rs.	**Total Rs.**	**Per unit Rs.**	**Total Rs.**
Variable Cost:				
Materials	700	4,20,000	700	5,60,000
Labour	250	1,50,000	250	2,00,000
Variable overheads	200	1,20,000	200	1,60,000
(A)	**1,150**	**6,90,000**	**1,150**	**9,20,000**
Semi variable cost:				
Variable selling expenses	104	62,400	104	83,200
Fixed selling expenses	43.33	26,000	32.50	26,000
(B)	**147.33**	**88,400**	**136.50**	**1,09,200**
Fixed cost:				
Administrative expenses	333.33	2,00,000	250.00	2,00,000
Total Cost(A+B+C)	**1,630.66**	**9,78,400**	**1,536.50**	**12,29,200**

(4) Thebudgetedoutputofaindustryspecializingintheproductionofaoneproductatthe optimumcapacityof6,400unitsperannumamountstoRs.1,76,048asdetailedbelow:

Particulars	Rs.	Rs.
Fixed costs		20,688
Variable costs:		
Power	1,440	
Repairs etc.	1,700	
Miscellaneous	540	
Direct material	49,280	
Direct Labour	1,02,400	1,55,360
Total cost		1,76,048

Thecompanydecidestohaveaflexiblebudgetwithaproductiontargetof3,200and4,800units (theactualquantityproposedtobeproducedbeinglefttoalaterdatebeforecommencement ofthebudgetperiod)

Prepareaflexiblebudgetforproductionlevelsof50%and75%.Assuming,sellingpriceperunit ismaintainedatRs.40asatpresent,indicatetheeffectonnetprofit.

Administrative , selling and distribution expenses continue at Rs.3,600.

Solution:

Theproductionat100%capacityis6400units,soitwillbe3,200unitsat50%and4,800unitsat 75%capacity.Thevariableexpenseswillchangeinthatproportion.

Flexible Budget

Particulars	100 %	75%	50 %
(i)Sales (per unit Rs.40)	2,56,000	1,92,000	1,28,000
Cost of Sales:			

(a)variable costs:			
Direct material	49,280	36,960	24,640
Direct Labour	1,02,400	76,800	51,200
Power	1,440	1,080	720
Repairs	1,700	1,275	850
Miscellaneous	540	405	270
Total variable costs	**1,55,360**	**1,16,520**	**77,680**
(b)Fixed Costs:	20,688	20,688	20,688
(ii) TotalCosts	**1,76,048**	**1,37,208**	**98,368**
Gross Profit(i)- (ii)	**79,952**	**54,792**	**29,632**
Less:Adm.,sellingand Dist. Costs	3,600	3,600	3,600
Net Profit	**76,352**	**51,192**	**26,032**

(5) Afactoryengagedinmanufacturingplasticbucketsisworkingat40%capacityandproduces 10,000bucketspermonth.

The present cost break up for one bucket is as under:

Materials Rs.10
Labour Rs.3
OverheadsRs.5(60%fixed)

ThesellingpriceisRs.20perbucket.Ifitisdesiredtoworkthefactoryat50%capacitythe sellingpricefallsby3%.At90%capacitythesellingpricefallsby5%accompaniedbyasimilar fallinthepriceofmaterial.

Youarerequiredtoprepareastatementtheprofitat50%and90%capacitiesandalsocalculate thebreak- evenpointsatthiscapacityproduction.

Solution

Flexible Budget

Particulars	**Capacity**		
	40%	**50%**	**90%**
Production and sales units	10,000	12,500	22,500
Sales price per unit	20	19.40	19.00
Sales Amount	2,00,000	2,42,500	4,27,500
Marginal Cost:			
Material: Rs.10 per unit(at 90% - Rs.9.50 per unit)	1,00,000	1,25,000	2,13,750
Labour	30,000	37,500	67,500
Variable overhead	20,000	25,000	45,000
Total	**1,50,000**	**1,87,500**	**3,26,250**
Contribution	50,000	55,000	1,01,250
Less: FixedCost	30,000	30,000	30,000
Profit	20,000	25,000	71,250
Contribution per unit	5	4.40	4.50
BEP (units) (F/C)	**6,000**	**6,818**	**6,667**

CASH BUDGET

(1) SaurashtraCo.Ltd.wishestoarrangeoverdraftfacilitieswithitsbankersfromtheperiodAugust toOctober2010whenitwillbemanufacturingmostlyforstock.Prepareacashbudgetforthe aboveperiodfromthefollowingdatagivenbelow:

Month	**Sales (Rs.)**	**Purchases (Rs.)**	**Wages (Rs.)**	**Mfg. Exp. (Rs.)**	**Office Exp. (Rs.)**	**Selling Exp. (Rs.)**
June	1,80,000	1,24,800	12,000	3,000	2,000	2,000
July	1,92,000	1,44,000	14,000	4,000	1,000	4,000
August	1,08,000	2,43,000	11,000	3,000	1,500	2,000
September	1,74,000	2,46,000	12,000	4,500	2,000	5,000
October	1,26,000	2,68,000	15,000	5,000	2,500	4,000
November	1,40,000	2,80,000	17,000	5,500	3,000	4,500
December	1,60,000	3,00,000	18,000	6,000	3,000	5,000

Additional Information:

(a) Cash on hand 1- 08- 2010 Rs.25,000.

(b) 50%ofcreditsalesarerealizedinthemonthfollowingthesaleandtheremaining50%in thesecondmonthfollowing.Creditorsarepaidinthemonthfollowingthemonthof purchase.

(c) Laginpaymentofmanufacturingexpenseshalfmonth.

(d) Laginpaymentofotherexpensesonemonth.

Solution:

CASH BUDGET

For 3 months from August to October 2010

Particulars	**August (Rs.)**	**September (Rs.)**	**October (Rs.)**
Receipts:			
Opening balance	25,000	44,500	(66,750)
Sales	1,86,000	1,50,000	1,41,000
Total Receipts(A)	2,11,000	1,94,500	74,250
Payments:			
Purchases	1,44,000	2,43,000	2,46,000
Wages	14,000	11,000	12,000
Mfg. Exp.	3,500	3,750	4,750
Office Exp.	1,000	1,500	2,000
Selling Exp.	4,000	2,000	5,000
Total payments(B)	1,66,500	2,61,250	2,69,750
Closing Balance(A- B)	**44,500**	**(66,750)**	**(1,95,500)**

Working Note:

1. ManufacturingExpense:

Particular	August	September	October
July (4000/2)	2000	- - -	- - -
August (3000/2)	1500	1500	- - -
September (4500/2)	- - -	2250	2250
October (5000/2)	- - -	- - - -	2500
Total	3500	3750	4750

2. Sales

Particular	August	September	October
June (180000/2)	90000	- - -	- - -
July (192000/2)	96000	96000	- - -
August (108000/2)	- - -	54000	54000
September (174000/2)	- - -	- - - -	87000
Total	186000	150000	141000

(2) S.K.Brotherswishtoapproachthebankersfortemporaryoverdraftfacilityfortheperiodfrom October2010toDecember2010.Duringtheperiodofthisperiodofthesethreemonths,thefirm willbemanufacturingmostlyforstock.Youarerequiredtoprepareacashbudgetfortheabove period.

Month	**Sales (Rs.)**	**Purchases (Rs.)**	**Wages (Rs.)**
August	3,60,000	2,49,600	24,000
September	3,84,000	2,88,000	28,000
October	2,16,000	4,86,000	22,000
November	3,48,000	4,92,000	20,000
December	2,52,000	5,36,000	30,000

(a) 50%ofcreditsalesarerealizedinthemonthfollowingthesalesandremaining50%inthe secondfollowing.

(b) Creditorsarepaidinthemonthfollowingthemonthofpurchase

(c) Estimatedcashason1- 10- 2010isRs.50,000.

CASH BUDGET

For 3 months from October to December 2010

Particulars	October (Rs.)	November(Rs.)	December(Rs.)
Receipts:			
Opening balance	50,000	1,12,000	(94,000)
Collection from Debtors	3,72,000	3,00,000	2,82,000
Total Receipts(A)	4,22,000	4,12,000	1,88,000
Payments:			
Payments to Creditors	2,88,000	4,86,000	4,92,000
Wages	22,000	20,000	30,000
Total payments(B)	3,10,000	5,06000	5,22,000
Closing Balance(A- B)	**1,12,000**	**(94,000)**	**- 3,34,000**

Working Note :Collection from debtors

Particulars	October (Rs.)	November(Rs.)	December(Rs.)
Sales			
August	1,80,000		-
September	1,92,000	1,92,000	-
October	-	1,08,000	1,08,000
November	-		1,74,000
	3,72,000	3,00,000	2,82,000

(3) TATACo.Ltd.istostartproductionon1st January2011.Theprimecostofaunitisexpectedto beRs.40(Rs.16permaterialsandRs.24forlabour).Inaddition,variableexpensesperunitare expectedtobeRs.8andfixedexpensespermonthRs.30,000.Paymentformaterialsistobe madeinthemonthfollowingthepurchase.One- thirdofsaleswillbeforcashandthereston creditforsettlementinthefollowingmonth.Expensesarepayableinthemonthinwhichthey areincurred.ThesellingpriceisfixedatRs.80perunit.Thenumberofunitstobeproducedand soldisexpectedtobe:

January900;February1200;March1800;April2000;May2,100June2400

DrawaCashBudgetindicatingcashrequirementsfrommonthtomonth.

CASH BUDGET of TATA LTD.

For 6 months from January to June 2011

Month	**Jan.**	**Feb.**	**March**	**April**	**May**	**June**
Receipts						
Opening Balance		(34,800)	(37,600)	(32,400)	(5,867)	(27,600)
Cash sales	24,000	32,000	48,000	53,333	56,000	64,000
Collection from Debtors		48,000	64,000	96,000	1,06,667	1,12,000
Total receipts(A)	24,000	45,200	74,400	1,16,933	1,56,800	1,48,400
Payments						
Creditors		14,400	19,200	288,00	32,000	33,600
Wages	21,600	28,800	43,200	48,000	50,400	57,600
Variable Exp.	7,200	9,600	14,400	16,000	16,800	19,200
Fixed Exp.	30,000	30,000	30,000	30,000	30,000	30,000
Total Payment(B)	58,800	82,800	1,06,800	1,22,800	1,29,200	1,40,400
Closing Balance	**- 34,800**	**- 37600**	**- 32400**	**- 5867**	**- 27,600**	**8,000**

(4) PrepareaCashBudgetfromthedatagivenbelowforaperiodofsixmonths(JulytoDecember)

(1)

Month	Sales	Raw Materials
May	75,000	37,500
June	75,000	37,500
July	1,50,000	52,500
August	2,25,000	3,67,500
September	3,00,000	1,27,500
October	1,50,000	97,500
November	1,50,000	67,500
December	1,37,500	____

(2) Collectionestimates:

- Withinthemonthofsale:5%
- Duringthemonthfollowingthesale:80%
- Duringthesecondmonthfollowingthesale:15%

(3) Paymentforrawmaterialsismadeinthenextmonth.

(4) SalaryRs.11,250,LeasepaymentRs.3750,Misc.Exp.Rs.1150,arepaideachmonth

(5) MonthlyDepreciationRs.15,000

(6) IncometaxRs.26,250eachinSeptemberandDecember.
(7)PaymentforresearchinOctoberRs.75,000
(8) Opening Balance on 1st July Rs.55,000.

CASH BUDGET

For the six months from July to December

Particulars	**July**	**Aug.**	**Sep.**	**October**	**Nov.**	**December**
Receipts						
Opening Balance	55,000	80,100	1,53,950	- 38450	24150	83000
Collection from Debtors	78,750	1,42,500	2,17,500	2,81,250	1,725,00	1,49,375
Total receipts(A)	1,33,750	2,22,600	3,71,450	2,42,800	1,96,650	2,32,375
Payments						
Payment to suppliers	37,500	52,500	3,67,500	1,27,500	97,500	67,500
Salary	11,250	11,250	11,250	11,250	11,250	11,250
Lease payment	3750	3750	3750	3750	3750	3750
Misc. expense	1,150	1,150	1,150	1,150	1,150	1,150
Income tax			26,250			26,250
Payment for Research				75,000		
Total Payment(B)	53,650	68,650	4,09,900	2,18,650	1,13,650	1,09,900
Closing Balance	**80,100**	**1,53,950**	**- 38,450**	**24,150**	**83,000**	**1,22,475**

Note: Depreciationisanon- cashitem.Itdoesnotinvolvecashflow.Hence,depreciationwillnotbe consideredaspaymentthroughcash.

(5) PrepareacashBudgetofR.M.C.LTD.forApril,MayandJune2012:

Months	**Sales(Rs.)**	**Purchases(Rs.)**	**Wages(Rs.)**	**Expenses(Rs.)**
Jan.(Actual)	80,000	45,000	20,000	5,000
Feb.(Actual)	80,000	40,000	18,000	6,000
March (Actual)	75,000	42,000	22,000	6,000
April (Budget)	90,000	50,000	24,000	7,000
May(Budget)	85,000	45,000	20,000	6,000
June(Budget)	80,000	35,000	18,000	5,000

Additional Information:

(i) 10%ofthepurchasesand20%ofsalesareforcash.

(ii) Theaveragecollectionperiodofthecompanyis½monthandthecreditpurchasesarepaid regularlyafteronemonth.

(iii) WagesarepaidhalfmonthlyandtherentofRs.500includedinexpensesispaidmonthlyand otherexpensesarepaidafteronemonthlag.

(iv) CashbalanceonApril1,2012maybeassumedtobeRs.15,000

CASH BUDGET

(For the months ending April, May & June 2012)

Particulars	**April (Rs.)**	**May (Rs.)**	**June (Rs.)**
Receipts Opening Balance Cash Sales Collection from Debtors	 15,000 18,000 66,000	 27,200 17,000 70,000	 35,700 16,000 66,000
Total Receipts(A)	99,000	1,14,200	1,17,700
Payments			
Cash Purchases	5,000	4,500	3,500
Payment to creditors	37,800	45,000	40,500
Wages	23,000	22,000	19,000
Rent	500	500	500
Other Exp.	5,500	6,500	5,500
Total Payments(B)	71,800	78,500	69,000
Closing balance	**27,200**	**35,700**	**48,700**

Ratio analysis

Meaning:

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides a measure of the relationship between two variables or figures.

This relationship can be expressed as a percent or as a quotient. Ratios are simple to calculate and easy to understand. The persons interested in the analysis of financial statements can be grouped under three heads,

i) owners or investors

ii) creditors and

iii) financial executives.

Although all these three groups are interested in the financial conditions and operating results, of an enterprise, the primary information that each seeks to obtain from these statements differs materially, reflecting the purpose that the statement is to serve.

Investors desire primarily a basis for estimating earning capacity. Creditors are concerned primarily with liquidity and ability to pay interest and redeem loan within a specified period. Management is interested in evolving analytical tools that will measure costs, efficiency, liquidity and profitability with a view to make intelligent decisions.

Objectives of Ratio Analysis

Interpreting the financial statements and other financial data is essential for all stakeholders of an entity. Ratio Analysis hence becomes a vital tool for financial analysis and financial management. Let us take a look at some objectives that ratio analysis fulfils.

1] Measure of Profitability

Profit is the ultimate aim of every organization. So if I say that ABC firm earned a profit of 5 lakhs last year, how will you determine if that is a good or bad figure? Context is required to measure profitability, which is provided by ratio analysis. Gross Profit Ratios, Net Profit Ratio, Expense ratio etc provide a measure of the profitability of a firm. The management can use such ratios to find out problem areas and improve upon them.

2] Evaluation of Operational Efficiency

Certain ratios highlight the degree of efficiency of a company in the management of its assets and other resources. It is important that assets and financial resources be allocated and used efficiently to avoid unnecessary expenses. Turnover Ratios and Efficiency Ratios will point out any mismanagement of assets.

3] Ensure Suitable Liquidity

Every firm has to ensure that some of its assets are liquid, in case it requires cash immediately. So the liquidity of a firm is measured by ratios such as Current ratio and Quick Ratio. These help a firm maintain the required level of short-term solvency.

4] Overall Financial Strength

There are some ratios that help determine the firm's long-term solvency. They help determine if there is a strain on the assets of a firm or if the firm is over-leveraged. The management will need to quickly rectify the situation to avoid liquidation in the future. Examples of such ratios are Debt-Equity Ratio, Leverage ratios etc.

5] Comparison

The organizations' ratios must be compared to the industry standards to get a better understanding of its financial health and fiscal position. The management can take corrective action if the standards of the market are not met by the company. The ratios can also be compared to the previous years' ratio's to see the progress of the company. This is known as trend analysis.

Advantages of Ratio Analysis

When employed correctly, ratio analysis throws light on many problems of the firm and also highlights some positives. Ratios are essentially whistleblowers, they draw the managements attention towards issues needing attention. Let us take a look at some advantages of ratio analysis.

- Ratio analysis will help validate or disprove the *financing*, *investment and operating decisions* of the firm. They summarize the financial statement into comparative figures, thus helping the management to compare and evaluate the financial position of the firm and the results of their decisions.
- It *simplifies complex accounting statements* and financial data into simple ratios of operating efficiency, financial efficiency, solvency, long-term positions etc.
- Ratio analysis help identify problem areas and bring the attention of the management to such areas. Some of the information is lost in the complex accounting statements, and ratios will help *pinpoint such problems*.
- Allows the company to conduct *comparisons with other firms, industry standards, intra-firm comparisons* etc. This will help the organization better understand its fiscal position in the economy.

Limitations of Ratio Analysis

While ratios are very important tools of financial analysis, they d have some limitations, such as

- The firm can make some year-end changes to their financial statements, to improve their ratios. Then the ratios end up being nothing but *window dressing*.
- Ratios *ignore the price level changes due to inflation*. Many ratios are calculated using historical costs, and they overlook the changes in price level between the periods. This does not reflect the correct financial situation.
- Accounting ratios completely *ignore the qualitative aspects of the firm*. They only take into consideration the monetary aspects (quantitative)
- There are *no standard definitions* of the ratios. So firms may be using different formulas for the ratios. One such example is Current Ratio, where some firms take into consideration all current liabilities but others ignore bank overdrafts from current liabilities while calculating current ratio
- And finally, accounting ratios *do not resolve any financial problems* of the company. They are a means to the end, not the actual solution.

Classification of Ratios

Liquidity Ratios

Also known as Solvency Ratios, and as the name indicates, it focuses on a company's current assets and liabilities to assess if it can pay the short-term debts. The three common liquidity ratios used are current ratio, quick ratio, and burn rate. Among the three, current ratio comes in handy to analyze the liquidity and solvency of the start-ups.

S. No.	RATIOS	FORMULAS
1	Current Ratio	Current Assets/Current Liabilities
2	Quick Ratio	Liquid Assets/Current Liabilities
3	Absolute Liquid Ratio	Absolute Liquid Assets/Current Liabilities

Profitability Ratios

These ratios analyze another key aspect of a company and that is how it uses its assets and how effectively it generates the profit from the assets and equities. This also then gives the analyst information on the effectiveness of the use of the company's operations.

S. No.	RATIOS	FORMULAS
1	Gross Profit Ratio	Gross Profit/Net Sales X 100

2	Operating Cost Ratio	Operating Cost/Net Sales X 100
3	Operating Profit ratio	Operating Profit/Net Sales X 100
4	Net Profit Ratio	Operating Profit/Net Sales X 100
5	Return on Investment Ratio	Net Profit After Interest And Taxes/ Shareholders Funds or Investments X 100
6	Return on Capital Employed Ratio	Net Profit after Taxes/ Gross Capital Employed X 100
7	Earnings Per Share Ratio	Net Profit After Tax & Preference Dividend /No of Equity Shares
8	Dividend Pay Out Ratio	Dividend Per Equity Share/Earning Per Equity Share X 100
9	Earning Per Equity Share	Net Profit after Tax & Preference Dividend / No. of Equity Share
10	Dividend Yield Ratio	Dividend Per Share/ Market Value Per Share X 100
11	Price Earnings Ratio	Market Price Per Share Equity Share/ Earning Per Share X 100
12	Net Profit to Net Worth Ratio	Net Profit after Taxes / Shareholders Net Worth X 100

Working Capital Ratios
Like the Liquidity ratios, it also analyses if the company can pay off the current debts or liabilities using the current assets. This ratio is crucial for the creditors to establish the liquidity of a company, and how quickly a company converts its assets to bring in cash for resolving the debts.

S. No.	**RATIOS**	**FORMULAS**
1	Inventory Ratio	Net Sales / Inventory
2	Debtors Turnover Ratio	Total Sales / Account Receivables
3	Debt Collection Ratio	Receivables x Months or days in a year / Net Credit Sales for the year
4	Creditors Turnover Ratio	Net Credit Purchases / Average Accounts Payable
5	Average Payment Period	Average Trade Creditors / Net Credit Purchases X 100
6	Working Capital	Net Sales / Working Capital

	Turnover Ratio	
7	Fixed Assets Turnover Ratio	Cost of goods Sold / Total Fixed Assets
8	Capital Turnover Ratio	Cost of Sales / Capital Employed

Capital Structure Ratios
Each firm or company has capital or funds to finance its operations. These ratios, i.e., the Capital Structure Ratios, analyze how structurally a firm uses the capital or funds.

S. No.	RATIOS	FORMULAS
1	Debt Equity Ratio	Total Long Term Debts / Shareholders Fund
2	Proprietary Ratio	Shareholders Fund/ Total Assets
3	Capital Gearing ratio	Equity Share Capital / Fixed Interest Bearing Funds
4	Debt Service Ratio	Net profit Before Interest & Taxes / Fixed Interest Charges

Overall Profitability Ratio
True to its name, these ratios measure how profitable a particular firm or company is, or how it can turn its assets and capital into profits for future use.

S. No.	RATIOS	FORMULAS
1	Overall Profit Ability Ratio	Net Profit / Total Assets

Problem - 1

ThefollowingTradingandProfitandLossAccountofFantasyLtd.fortheyear31-3-2000isgiven below:

Particular	Rs.	Particular	Rs.
To OpeningStock	76,250	By Sales	5,00,000
“ Purchases	3,15,250	“ Closing stock	98,500
“ Carriage and Freight	2,000		
“ Wages	5,000		
“ Gross Profit b/d	2,00,000		
	5,98,500		5,98,500
To Administration expenses	1,01,000	By Gross Profit b/d	2,00,000
“SellingandDist.expenses “	12,000	“ Non-operating incomes:	
Non-operating expenses “	2,000	“ Interest on Securities	1,500
FinancialExpenses	7,000	“ Dividend on shares	3,750
Net Profit c/d	84,000	“ Profit on sale of shares	750
	2,06,000		2,06,000

Calculate:

1. GrossProfitRatio **2.**ExpensesRatio **3.** OperatingRatio

1. NetProfitRatio **5.**Operating(Net)ProfitRatio**6.**StockTurnoverRatio.

Solution – 1 (Problem related to Revenue Ratio)

1. GrossProfitMargin= $\frac{\text{Gross profit}}{\text{Sales}} \times 100$

$\frac{2,00,000}{5,00,000} \times 100$

= 40%

2. Expenses Ratio= $\frac{\text{Op. Expenses}}{\text{Net Sales}} \times 100$

$\frac{1,13,000}{5,00,000} \times 100$

= 22.60%

3. Operating Ratio= $\frac{\text{Cost of goods sold + Op. Expenses}}{\text{Net Sales}}$ X 100

$\frac{3,00,000 + 1,13,000}{5,00,000}$ X 100

= 82.60%

Cost of Goods sold = Op. stock + purchases + carriage and Freight + wages – Closing Stock

= 76250 + 315250 + 2000 + 5000 - 98500

= Rs.3,00,000

4. Net Profit Ratio= $\frac{\text{NetProfit}}{\text{NetSales}}$ X 100

$\frac{84,000}{5,00,000}$ X 100

= 16.8%

5. OperatingProfitRatio= $\frac{\text{Op.Profit}}{\text{NetSales}}$ X 100

Operating Profit = Sales – (Op. Exp. + Admin Exp.)

$\frac{87,000}{5,00,000}$ X 100

= 17.40%

6. Stock Turnover Ratio= $\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$

$\frac{3,00,000}{87,375}$

= 3.43times

Problem - 2

The Balance Sheet of Punjab Auto Limited as on 31-12-2002 was as follows:

Particular	Rs.	Particular	Rs.
Equity Share Capital	40,000	Plant and Machinery	24,000
Capital Reserve	8,000	Land and Buildings	40,000
8%LoanonMortgage	32,000	Furniture & Fixtures	16,000
Creditors	16,000	Stock	12,000
Bank overdraft	4,000	Debtors	12,000
Taxation:		Investments (Short-term)	4,000
Current	4,000	Cash in hand	12,000
Future	4,000		
Profit and Loss A/c	12,000		
	1,20,000		1,20,000

Fromtheabove,compute(a)theCurrentRatio,(b)QuickRatio,(c)Debt-EquityRatio,and(d) ProprietaryRatio.

Solution – 2 (Problem related to Balance Sheet Ratio)

1.CurrentRatio =	Current AssetsCurrent liabilities	
	CurrentAssets=Stock+debtors+Investments(shortterm)+ Cash Inhand	
	CurrentLiabilities=Creditors+bankoverdraft+Provisionfor Taxation(current&Future)	
	CA = 12000 + 12000 + 4000 + 12000 = 40,000	

	CL = 16000 + 4000 + 4000 + 4000	
	= 28,000	
	= <u>40,000</u> 28,000	
	= 1.43 : 1	

2. QuickRatio =	<u>Quick</u> <u>Assets</u>QuickLia bilities	
	Quick Assets = Current Assets - Stock	
	Quick Liabilities = Current Liabilities –(BOD + PFT future)	
	QA = 40,000 – 12,000 = 28,000	
	QL = 28,000 – (4,000 + 4,000) = 20,000	
	= <u>28,000</u> 20,000	
	= 1.40 : 1	

3. Debt – Equity Ratio=	<u>Long Term Debt</u> <u>(Liabilities)</u>Shareholders Fund	
	LTL = Debentures + long term loans	
	SHF=Eq.Sh.Cap.+Reserves&Surplus+PreferenceSh. Cap. – Fictitious Assets	
	LTL = 32,000	
	SHF = 40,000 + 8,000 + 12,000 = 60,000	

= 32,000 60,000	
= 0.53 : 1	

4. ProprietaryRatio =	Shareholders' FundsTotal Assets	
	SHF=Eq.Sh.Cap.+Reserves&Surplus+PreferenceSh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 40,000 + 8,000 + 12,000 = 60,000	
	TA = 1,20,000	
	= 60,000 1,20,000	
	= 0.5 : 1	

Problem-3 [Sau.Uni.T.Y.,April,2000]

The details of Shreenath Company are as under:

Sales (40% cash sales)		15,00,000
Less: Cost of sales		7,50,000
	Gross Profit:	7,50,000
Less: Office Exp. (including int. on debentures)	1,25,000	
Selling Exp.	1,25,000	2,50,000
	Profit beforeTaxes:	5,00,000
Less: Taxes		2,50,000
	Net Profit:	2,50,000

Balance Sheet

Particular	Rs.	Particular	Rs.
Equity share capital	20,00,000	Fixed Assets	55,00,000
10%Preferencesharecapital	20,00,000	Stock	1,75,000
Reserves	11,00,000	Debtors	3,50,000
10% Debentures	10,00,000	Bills receivable	50,000
Creditors	1,00,000	Cash	2,25,000
Bank-overdraft	1,50,000	Fictitious Assets	1,00,000
Bills payable	45,000		
Outstanding expenses	5,000		
	64,00,000		64,00,000

Besidethedetailsmentionedabove,theopeningstockwasofRs.3,25,000.Taking360daysofthe year,calculatethefollowingratios;alsodiscussthepositionofthecompany:

(1) Grossprofitratio.(2)Stockturnoverratio.(3)Operatingratio.(4)Currentratio.(5)Liquid ratio.(6)Debtorsratio.(7)Creditorsratio.(8)Proprietaryratio.(9)Rateofreturnonnet capital employed. (10) Rate of return on equity shares.

Solution – 3 (Problem related to Composite Ratio)

1. GrossProfitMargin=	Gross profitSales	**X** 100
	7,50,000 / 15,00,000	**X** 100
	= 50%	

2. Stock Turnover Ratio=	Cost of goods sold / Avg. Stock
	Avg.stock=OpeningStock+ClosingStock / 2
	COGS = Sales – GP
	3,25,000 + 1,75,000 / 2

AS = 2,50,000
COGS = 15,00,000 – 7,50,000 7,50,000
=7,50,000 2,50,000
= 3 times

3. OperatingProfitRatio=	Op. ProfitNet Sales	**X** 100
	OperatingProfit=Sales-(Op.Exp.+COGS.)	
	OP = 15,00,000 – (7,50,000 + 1,25,000 + 25,000) = 6,00,000 **(excluding Interest on Debentures)**	
	= 6,00,00015,00,00 0	**X** 100
	= 40%	

4. Current Ratio =	Current AssetsCurrent liabilities	
	Current Assets = Stock + debtors + Bills receivable + Cash	
	CurrentLiabilities=Creditors+bankoverdraft+Billspayable+ Outstanding expenses	
	CA = 1,75,000 + 3,50,000 + 50,000 + 2,25,000 = 8,00,000	

CL = 1,00,000 + 1,50,000 + 45,000 + 5,000 = 3,00,000	
= 8,00,000 / 3,00,000	
= 2.67 : 1	

5.QuickRatio/LiquidRatio =	Liquid AssetsLiquid Liabilities	
	(Liquid) Quick Assets = Current Assets - Stock	
	(Liquid) Quick Liabilities = Current Liabilities – BOD	
	QA = 8,00,000 – 1,75,000 = 6,25,000	
	QL = 3,00,000 – 1,50,000 = 1,50,000	
	= 6,25,000 / 1,50,000	
	= 4.17 : 1	

6.DebtorsRatio =	Debtors+Billsreceivable / Creditsales	**X** 365 / 360days
	= 3,50,000 + 50,000 / 9,00,000 (60% of 15,00,000)	**X** 360 days
	= 0.444	**X** 360 days
	= 160 days	

7. Creditors Ratio =	Creditors+Billspayable / CreditPurchase	X 365 / 360 days
	= 1,00,000 + 45,000 / 7,50,000 **Notes:Ifcreditpurchasecouldnotfindout atthatpointCostofGoodssoldconsider Creditpurchase**	X 360 days
	= 0.193	X 360 days
	= 69 days	

8. ProprietaryRatio =	Shareholders' FundsTotal Assets	
	SHF=Eq.Sh.Cap.+Reserves&Surplus+PreferenceSh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 20,00,000 + 20,00,000 + 11,00,000 – 1,00,000 = 50,00,000	
	TA = 64,00,000 – 1,00,000 = 63,00,000	
	= 50,00,000 / 63,00,000	
	= 0.79 : 1	

Notes:

Rate of Return on Capital Employed		**Rate of Return on Share holdersFund**		**Rate of return on Equity Shareholders Fund**	
= EBIT / Capital employed	X 100	= PAT / SHF	X 100	= PAT – Pref. Div. / ESHF	X 100
CE = Eq Sh. Cap. + Pref.Sh.		**SHF =** Eq. Sh. Cap. + Pref. Sh.		**ESHF =** Eq. Sh. Cap. +	

Cap. + Reserves & Surplus+ Debenture+LongTermLoan – Fictitious Assets	Cap. + Reserves & Surplus – Fictitious Assets	Reserves&Surplus- Fictitious Assets

Sales	15,00,000
Less: Cost of goods sold	7,50,000
Gross profit	**7,50,000**
Less: Operating expenses (including Depreciation)	1,50,000
EarningsbeforeInterest&Tax(EBIT)	**6,00,000**
Less: Interest Cost	1,00,000
Earnings before Tax (EBT)	**5,00,000**
Less: Tax liability	2,50,000
EarningsafterTax(EAT/PAT)	**2,50,000**
Less: Preference share dividend	2,00,000
Distributional Profit	**50,000**

9.		**10.**		**11.**	
Rate of Return on Capital Employed		**Rate of Return on Share holdersFund**		**Rate of return on Equity Shareholders Fund**	
= $\frac{\text{EBIT}}{\text{Capital employed}}$	X 100	= $\frac{\text{PAT}}{\text{SHF}}$	X 100	=$\frac{\text{PAT-Pref.Div.}}{\text{ESHF}}$	X 100
CE=EqSh.Cap.+Pref.Sh. Cap. + Reserves & Surplus+ Debenture+LongTermLoan – Fictitious Assets		**SHF**=Eq.Sh.Cap.+Pref.Sh. Cap. + Reserves & Surplus – FictitiousAssets		**ESHF** = Eq. Sh. Cap. + Reserves&Surplus- Fictitious Assets	
CE = 20,00,000 +20,00,000 11,00,000 +10,00,000 - 1,00,000		**SHF** = 20,00,000 + 20,00,000 11,00,000 – 1,00,000		ESHF=20,00,000+ 11,00,000-1,00,000	

= 60,00,000		= 50,00,000		= 30,00,000	
= 6,00,000 / 60,00,000	X 100	= 2,50,000 / 50,00,000	X 100	= 50,000 / 30,00,000	X 100
= 10%		= 5%		= 1.67 %	

Problem = 4

Fromthefollowingparticularsextractedfromthebooksof Ashok&Co.Ltd.,computethefollowing ratios andcomment:

(a) Currentratio,(b)AcidTestRatio,(c)Stock-TurnoverRatio,(d)DebtorsTurnoverRatio,(e) Creditors'TurnoverRatio,andAverageDebtCollectionperiod.

	1-1-2002 Rs.	31-12-2002 Rs.
BillsReceivable	30,000	60,000
BillsPayable	60,000	30,000
SundryDebtors	1,20,000	1,50,000
SundryCreditors	75,000	1,05,000
Stock-in-trade	96,000	1,44,000

Additional information:

(a) On31-12-2002,therewereassets:BuildingRs.2,00,000,CashRs.1,20,000andCashatBankRs. 96,000.

(b) CashpurchasesRs.1,38,000andPurchasesReturnswereRs.18,000.

(c) CashsalesRs.1,50,000andSalesreturnswereRs.6,000.

Rate of gross profit 25% on sales and actual gross profit was Rs. 1,50,000.

Solution – 4 (Problem related to find out missing item)

Notes:Inthisproblemavailableinformationisnotenoughtosolveratiosaskedso thatneedtoprepareTradingAccounttoidentifyvalueswhicharenotgiveninthequestion.

Trading Account

Particular		Amount Rs.	Particular		Amount Rs.
To Opening Stock		96,000	BySales:Cash:	1,50,000	
To Purchase: Cash:	1,38,000		Credit :	4,56,000	
Credit:	3,78,000			6,06,000	
	5,16,000		Less: S/R	6,000	**6,00,000**

Less:P/R 18,000	4,98,000	By Closing Stock	1,44,000
To Gross Profit	1,50,000		
	7,44,000		7,44,000

1. GrossProfitMargin=	Gross profitSales	X 100
	25% = 1,50,000 / Sales	X 100
	Sales=1,50,000 / 25	X 100
	Sales = 6,00,000	

2.CurrentRatio =	Current AssetsCurrent liabilities	
	CurrentAssets=Stock+debtors+Billsreceivable+Cash+ BankBalance	
	Current Liabilities = Creditors + Bills payable	
	CA = 1,44,000 + 1,50,000 + 60,000 + 1,20,000 + 96,000 = 5,70,000	
	CL = 1,05,000 + 30,000 = 1,35,000	
	= 5,70,000 / 1,35,000	
	= 4.22 : 1	

3. AcidTestRatio =	Cash&CashEquivalentAssetsLiquidLiabilities	

Cash&CashequivalentAssets=Cash+Bank+Short termInvestments	
(Liquid) Quick Liabilities = Current Liabilities – BOD	
= 1,20,000 + 96,000 = 2,16,000	
QL = 1,05,000 + 30,000 = 1,35,000	
= $\frac{2,16,000}{1,35,000}$	
= 1.6 : 1	

4. Stock Turnover Ratio=	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$
	COGS = Sales – GP
	$\frac{96,000 + 1,44,000}{2}$
	AS = 1,20,000
	COGS = 6,00,000 – 1,50,000 4,50,000
	=$\frac{4,50,000}{1,20,000}$
	= 3.75 times

5.DebtorsRatio = **(Avg. debt collection period)**	$\frac{\text{Debtors+Billsreceivable}}{\text{Creditsales}}$	**X** 365 / 360days
	= $\frac{1,50,000 + 60,000}{4,56,000}$	**X** 365 days

= 0.461	X 365 days
= 168 days	

6. Creditors Ratio =	$\frac{\text{Creditors+Billspayable}}{\text{CreditPurchase}}$	X 365 / 360 days
	= $\frac{1,05,000 + 30,000}{3,78,000}$	X 365 days
	= 0.357	X 365 days
	= 130 days	

Problem - 5

Following is the summarised Balance Sheet of Mona Ltd. as on 31-3-04.

Particular	Rs.	Particular	Rs.
EquitySharesofRs.10each10%	10,00,000	Fixed Assets	20,00,000
Pref.Sh.ofRs.100eachReserves	4,00,000	Investments	2,00,000
andSurplus	7,00,000	Closing Stock	2,00,000
15% Debentures	5,00,000	Sundry Debtors	4,60,000
Sundry Creditors	2,40,000	Bills Receivable	60,000
Bank Overdraft	1,60,000	Cash at Bank	60,000
		Preliminary Expenses	20,000
	30,00,000		30,00,000

Summarised Profit and Loss Account is as under for the year ending on 31-3-'04:

	Rs.
Sales (25% Cash sales)	80,00,000
Less: Cost of goods sold	56,00,000
Gross Profit	24,00,000
Net profit (Before interest and tax 50%)	9,00,000

Calculate the following ratios:
(1)RateonReturnonCapitalEmployed(2)Proprietary Ratio(3)Debt-Equity(4)Capitalgearing Ratio(5)DebtorsRatio(365daysoftheyear.)(6)RateofReturnonShareholders'Funds(7)Rateof ReturnonEquityshareholdersfund

Solution-5 **Statement ofProfitability**

Sales	80,00,000
Less: Cost of goods sold	56,00,000
Gross profit	**24,00,000**
Less: Operating expenses (including Depreciation)	15,00,000
EarningsbeforeInterest&Tax(EBIT)	**9,00,000**
Less: Interest Cost	75,000
Earnings before Tax (EBT)	**8,25,000**
Less: Tax liability(50%)	4,12,500
EarningsafterTax(EAT/PAT)	4,12,500
Less: Preference share dividend	40,000
Distributional Profit	**3,72,500**

1.	6.	7.
Rate of Return on Capital Employed	**Rate of Return on Share holdersFund**	**Rate of return on Equity Shareholders Fund**
$= \frac{EBIT}{Capital\ employed}$ X 100	$= \frac{PAT}{SHF}$ X 100	$= \frac{PAT - Pref.Div.}{ESHF}$ X 100
CE=EqSh.Cap.+Pref.Sh. Cap. + Reserves & Surplus+ Debenture+LongTermLoan – Fictitious Assets	**SHF**=Eq.Sh.Cap.+Pref.Sh. Cap. + Reserves & Surplus – FictitiousAssets	**ESHF** = Eq. Sh. Cap. + Reserves&Surplus- Fictitious Assets
CE = 10,00,000 +4,00,000 7,00,000+5,00,000-20,000 **= 25,80,000**	**SHF**=10,00,000+4,00,000+ 7,00,000 - 20,000 **= 20,80,000**	ESHF=10,00,000+7,00,000 – 20,000 **= 16,80,000**
$= \frac{9,00,000}{25,80,000}$ X 100	$= \frac{4,12,500}{20,80,000}$ X 100	$= \frac{3,72,500}{16,80,000}$ X 100
= 34.88%	**= 19.83%**	**= 22.17 %**

2. ProprietaryRatio =	Shareholders' FundsTotal Assets	
	SHF=Eq.Sh.Cap.+Reserves&Surplus+PreferenceSh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000	
	TA = 30,00,000 – 20,000 = 29,80,000	
	$= \frac{20,80,000}{29,80,000}$	
	= 0.70 : 1	

3. Debt – Equity Ratio=	Long Term Debt (Liabilities)Shareholders Fund	
	LTL = Debentures + long term loans	
	SHF=Eq.Sh.Cap.+Reserves&Surplus+PreferenceSh. Cap. – Fictitious Assets	
	LTL = 5,00,000	
	SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000	
	$= \frac{5,00,000}{20,80,000}$	
	= 0.24 : 1	

4. CapitalGearingRatio =	Fixed Interest or Dividend SecuritiesEquity Shareholders Fund	
	FIS = Debentures + Preference share capital	

ESHF=Eq.Sh.Cap.+Reserves&Surplus-Fictitious Assets	
LTL = 9,00,000	
ESHF = 10,00,000 + 7,00,000 - 20,000 = 16,80,000	
= $\frac{9,00,000}{16,80,000}$	
= 0.54 : 1	

5. Debtors Ratio = **(Avg. debt collection period)**	$\frac{\text{Debtors+Billsreceivable}}{\text{Creditsales}}$	X 365/360days
	= $\frac{4,60,000 + 60,000}{60,00,000}$	X 365 days
	= 0.461	X 365 days
	= 31.63 days **= 32 days (Aprox.)**	

Problem - 6

Two years' Balance sheets of Jamuna Company Ltd. are as follows:**[S. U. T.Y.-April, 1999]**

Liabilities	31-3-03	31-3-04	Assets	31-3-03	31-3-04
Equity share capital	1,00,000	1,50,000	Land and Buildings	1,00,000	90,000
10%Pref. Sh. capital	50,000	50,000	Machinery	90,000	90,000
GeneralReserveProfit&	30,000	30,000	Debtors	53,000	30,000
Loss A/c 12%	20,000	-----	Bills Receivable	20,000	12,000
Debentures Creditors	1,00,000	50,000	Stock	75,000	90,000
Billspayable	30,000	35,000	Bank Balance	15,000	35,000
Bank Overdraft	10,000	25,000	Cash Balance	2,000	13,000
O/s. Expenses	10,000	20,000	Profit&LossA/c	----	10,000
	5,000	10,000			
	3,55,000	3,70,000		3,55,000	3,70,000

Additional Information:

	2002-'03	2003-04
	Rs.	Rs.
(1) Sales	3,65,000	2,19,000
(2) Cost of Goods sold	2,19,000	1,46,000
(3) Net profit (Before Pref. Dividend)	35,000	47,500
(4) Stock on 1-4-'02	71,000	---

Calculatefollowingratiosandgiveyouropinionaboutcompanypositionin2003-'04incomparison with2002-'03.Whetheritispositiveornegative?

(1)Currentratio(2)Liquidratio(3)Debtorsratio(Take365daysforcalculations)(4)Grossprofit ratio(5)StockTurnoverratio(6)Rateofreturnonequityshare-holders'funds.

Solution- 6 (problemrelatedtocomparativeanalysisbetweentwoyears)

1.CurrentRatio =	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
	CurrentAssets=Stock+debtors+Billsreceivable+Cash+ BankBalance	
	Current Liabilities = Creditors + Bills payable	
	2002-03: $= \frac{53,000+20,000+75,000+15,000+2,000}{30,000 + 10,000 + 10,000 + 5,000}$	
	$= \frac{1,65,000}{55,000}$	
	= 3 :1	
	2003-04: $=\frac{30,000 + 12,000 + 90,000 + 35,000 + 13,000}{35,000 + 25,000 + 20,000 + 10,000}$	
	$= \frac{1,80,000}{90,000}$	
	= **2 : 1**	

2.LiquidRatio =	Liquid Assets Liquid	

	liabilities	
	(Liquid) Quick Assets = Current Assets - Stock	
	(Liquid) Quick Liabilities = Current Liabilities – BOD	
	2002-03: $= \frac{1,65,000 - 75,000}{55,000 - 10,000}$	
	$= \frac{90,000}{45,000}$	
	= 2 :1	
	2003-04: $= \frac{1,80,000 - 90,000}{90,000 - 20,000}$	
	$= \frac{90,000}{70,000}$	
	= **1.29 : 1**	

3.DebtorsRatio = **(Avg. debt collection period)**	$\frac{\text{Debtors+Billsreceivable}}{\text{Creditsales}}$	X 365/360days
	2002-03: $= \frac{53,000 + 20,000}{3,65,000}$	X 365 days
	$= \frac{73,000}{3,65,000}$	X 365 days
	= 73 days	
	2003-04: $= \frac{30,000 + 12,000}{2,19,000}$	X 365 days
	$= \frac{42,000}{2,19,000}$	X 365 days
	= 70 days	

4. GrossProfitMargin=	Gross profitSales	X 100
	GP = Sales - COGS **2002-03:** 365000 - 219000 = 1,46,000 **2003-04:** 219000 - 146000 = 73,000	
	2002-03: = $\frac{1,46,000}{3,65,000}$	X 100
	= 40%	
	2003-04: = $\frac{73,000}{2,19,000}$	X 100
	= 33.33%	

2. Stock Turnover Ratio=	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$
	2002-03: $\frac{71000 + 75000}{2}$ = 73,000 **2003-04:** $\frac{75000 + 90000}{2}$ = 82,500
	2002-03: = $\frac{2,19,000}{73,000}$
	= **3 times**
	2003-04:

$= \frac{1,46,000}{82,500}$
= 1.77 times

7.Rate of return on Equity Shareholders Fund:		
	2002-03 $= \frac{\text{PAT–Pref.Div.}}{\text{ESHF}}$	X 100
	ESHF=Eq.Sh.Cap.+Reserves&Surplus–Fictitious Assets	
	ESHF = 1,00,000 + 30,000 + 20,000 **= 1,50,000**	
	$= \frac{35,000 - 5,000}{1,50,000}$	X 100
	= 20 %	
	2003-04: **ESHF:** 1,50,000 + 30,000 - 10,000 = 1,70,000	
	$= \frac{47,500 - 5,000}{1,70,000}$	X 100
	= **25%**	

Problem - 7

The Balance Sheet as on 2002 and 2003 are as under:

Liabilities	2002	2003	Assets	2002	2003
Equity share capital	1,00,000	1,25,000	Land and Buildings	50,000	75,000
GeneralReserveProfit&	12,500	15,000	Plant Machinery	57,500	55,000
Loss A/cCreditors	10,000	7,500	Stock	10,000	12,500
Bills payable	5,000	6,250	Debtors	7,500	10,000
O/s. Expenses	3,750	7,500	Cash&Bank	5,000	7,500
Provident Fund	1,250	3,750	Bills Receivable	2,500	5,000
	7,500	5,000	Preliminary Exp.	7,500	5,000
	1,40,000	1,70,000		1,40,000	1,70,000

Profit & Loss A/c.

Particulars	2002	2003	Particulars	2002	2003
To Op. Stock	5,000	10,000	By Sales	62,500	1,12,500
To Purchase	37,500	47,500	By Closing Stock	10,000	12,500
To Office Exp.	7,500	10,000	ByProfitonSaleof Furniture	2,500	----
To Selling exp.	5,000	12,500			
To Fin. Exp.	2,500	15,000			
To Net Profit	17,500	30,000			
	75,000	1,25,000		75,000	1,25,000

Findout(1)CurrentRatio(2)StockTurnoverRatio(3)GrossProfitRatio(4)LiquidRatio(5)Debtor Ratio(workingdays300)(6)ReturnonEquityCapitalemployed(7)OwnershipRatio.

Solution - 7

1. Current Ratio =	Current AssetsCurrent liabilities
	CurrentAssets=Stock+debtors+Billsreceivable+Cash&BankBalance
	CurrentLiabilities=Creditors+Billspayable+O/sExp.+PF
	2002: $= \dfrac{10,000+7,500+5,000+2,500}{5,000+3,750+1,250+7,500}$
	$= \dfrac{25,000}{17,500}$
	= 1.43 :1
	2003-04: $= \dfrac{12,500+10,000+7,500+5,000}{6,250+7,500+3,750+5,000}$
	$= \dfrac{35,000}{22,500}$
	= 1.56 : 1

2. Stock Turnover Ratio=	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	Avg. stock = $\frac{\text{Opening Stock + Closing Stock}}{2}$
	2002-03: $\frac{5000 + 10000}{2}$ = 7,500 **2003-04:** $\frac{10000 + 12500}{2}$ = 11,250
	GrossProfit=Sales+ClosingStock-(Opening Stock +Purchase) **COGS** = Sales - GP
	2002: = 62,500 + 10,000 - (5,000 + 37,500) = 30,000 **COGS** = 62,500 - 30,000 = 32,500
	2003:=1,12,500+12,500-(10,000+47,500) = 67,500 **COGS** = 1,12,500 - 67,500 = 45,000
	2002-03: **=** $\frac{32,500}{7,500}$
	= **4.33 times**
	2003-04: = $\frac{45,000}{11,250}$
	= 4 times

3. GrossProfitMargin=	Gross profitSales	X 100
	GP = Sales - COGS **2002-03:** **2002:** =62,500+10,000-(5,000 +37,500) = 30,000 **2003-04:**=1,12,500+12,500-(10,000 + 47,500) = 67,500	
	2002-03: = $\frac{30,000}{62,500}$	X 100
	= 48%	
	2003-04: = $\frac{67,500}{1,12,500}$	X 100
	= 60%	

4. Liquid Ratio =	Liquid AssetsLiquid liabilities	
	(Liquid) Quick Assets = Current Assets - Stock	
	(Liquid) Quick Liabilities = Current Liabilities – BOD	
	2002-03: = $\frac{25,000 - 10,000}{17,500}$	
	= 15,00017,500	
	= 0.86 :1	
	2003-04: = $\frac{35,000 - 12,500}{22,500}$	

$= \frac{22,500}{22,500}$	
= **1 : 1**	

5.DebtorsRatio = **(Avg. debt collection period)**	$\frac{\text{Debtors+Billsreceivable}}{\text{Creditsales}}$	X 300 days
	2002-03: $= \frac{7,500 + 2,500}{62,500}$	X 300 days
	$= \frac{10,000}{62,500}$	X 300 days
	= 48 days	
	2003-04: $= \frac{10,000 + 5,000}{1,12,500}$	X 300 days
	$= \frac{15,000}{1,12,500}$	X 300 days
	= 40 days	

6.Rate of return on Equity Shareholders Fund:		
	2002 $= \frac{\text{PAT – Pref. Div.}}{\text{ESHF}}$	X 100
	ESHF=Eq.Sh.Cap.+Reserves&Surplus-Fictitious Assets	
	ESHF=1,00,000+12,500+10,000-7,500 **= 1,15,000**	
	$= \frac{17,500}{1,15,000}$	X 100
	= 15.22 %	
	2003:	

ESHF:1,25,000+15,000+7,500-5,000 = 1,42,500	
= $\frac{30,000}{1,42,500}$	**X** 100
= **21.05%**	

7. OwnershipRatio =	$\frac{\text{Shareholders' Funds}}{\text{Total Assets}}$	
	SHF=Eq.Sh.Cap.+Reserves&Surplus–FictitiousAssets	
	Total Assets = Total Assets – Fictitious Assets	
	2002= SHF=1,00,000+12,500+10,000-7,500 = 1,15,000	
	TA = 1,40,000 - 7,500 = 1,32,500	
	= $\frac{1,15,000}{1,32,500}$	
	= 0.87 : 1 **OR** **= 87%**	
	2003=SHF=1,25,000+15,000+7,500-5,000 = 1,42,500	
	TA = 1,70,000 - 5,000 1,65,000	
	=$\frac{1,42,500}{1,65,000}$	
	= 0.86 : 1 **OR** **= 86%**	

Problem - 8

Following are incomplete Trading & Profit and Loss A/c. and Balance Sheet.

Trading A/c.

Particular	Rs.	Particular	Rs.
To Op. stock	3,50,000	By Sales	(?)
To Purchase	(?)	By Closing Stock	(?)
To Purchase Return	87,000		
To Gross Profit	7,18,421		
	14,96,710		14,96,710

Profit & Loss A/c.

Particular	Rs.	Particular	Rs.
To Office Exp.	3,70,000	By Gross Profit	7,18,421
To Int. on Deb.	30,000	By Commission	(?)
To Tax. Provision	18,421		
To Net Profit	3,50,000		
	(?)		(?)

Balance Sheet

Particular	Rs.	Particular	Rs.
Paid Up Capital	5,00,000	Plant&machinery	7,00,000
General Reserve	(?)	Stock	(?)
P & L a/c.	(?)	Debtors	(?)
10% Debenture	(?)	Bank	62,500
Current Liabilities	6,00,000	Other Fixed Assets	(?)
	(?)		(?)

Find out missing items with the help of other details are as under:

1. CurrentRatiowas2:1.
2. ClosingStockis25%ofSales.
3. ProposedDividendwas40%ofpaidupcapital.
4. GrossprofitRatiowas60%.
5. AmounttransfertoGeneralReserveissameasproposedDividend.
6. BalanceofP&LAccountiscalculated10%ofproposeddividend.
7. Commissionincomeis1/7ofNetprofit.
8. BalanceofGeneralreserveistwicethecurrentyeartransferamount.

Solution - 8

Trading A/c.

Particular	Rs.	Particular	Rs.
To Op. stock	3,50,000	By Sales (?)	**11,97,368**
To Purchase(?)	**3,41,289**	By Closing Stock (?)	**2,99,342**
To Purchase Return	87,000		
To Gross Profit	7,18,421		
	14,96,710		**14,96,710**

Profit & Loss A/c.

Particular	Rs.	Particular	Rs.
To Office Exp.	3,70,000	By Gross Profit	7,18,421
To Int. on Deb.	30,000	By Commission (?)	**50,000**
To Tax. Provision	18,421		
To Net Profit	3,50,000		
	7,68,421		**7,68,421**

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Paid Up Capital	5,00,000	Plant & machinery	7,00,000
General Reserve (?)	**6,00,000**	Stock (?)	**2,99,342**
P & L a/c. (?)	**20,000**	Debtors (?)	**8,38,158**
10% Debenture (?)	**3,00,000**	Bank (?)	62,500
Current Liabilities	6,00,000	Other Fixed Assets	**1,20,000**
	20,20,000		**20,20,000**

1. GrossProfitMargin=	Gross profit / Sales	X 100
	60 = 7,18,421 / Sales	X 100
	Sales = 7,18,421 / 60	X 100
	Sales = 11,97,368	

2. ClosingStock =	**Sales x25%**
	11,97,368 x 25%
	CS = 2,99,342

3. **Proposed Dividend**=	Paid up Capital x 40%
	= 5,00,000 x 40%
	PD = 2,00,000

4. General Reserve=	GRfindoutasperProposed Dividend
	ProposedDividend is 2,00,000
	Sothat Proposed Dividend =General Reserve
	GR = 2,00,000

5. Commission=	It is 1/7 part of Net Profit
	Commission = 3,50,000 x 1/7
	Commission = 50,000

6. Profit & Loss Account=	Itis10%ofProposedDividend
	P & L A/c. = 2,00,000 x 10%
	P & L A/c. = 20,000

7. Debenture=	Rate of Interest is 10%
	Interest amount is Rs. 30,000
	So that, Debenture value is = 30,000 x 10/100
	= 3,00,000

8.CurrentRatio =	Current AssetsCurrent liabilities	
	2= Stock+debtors+BankBalan ceCurrentLiability	
	2= 2,99,342+debtors+62,500	

	6,00,000	
	12,00,000 = Debtors + 3,61,842	
	Debtors = 12,00,000 -3,61,842	
	Debtors = 8,38,158	

8.CurrentRatio =	Current AssetsCurrent liabilities	
	2= Stock+debtors+BankBalanceCurrentLiability	
	2= 2,99,342+debtors+62,500 / 6,00,000	
	12,00,000 = Debtors + 3,61,842	
	Debtors = 12,00,000 -3,61,842	
	Debtors = 8,38,158	

8. Balance of General Reserve =	It is twice of current year provision for General Reserve
	Current year provision is Rs. 2,00,000
	So that, Balance of G. R. = 2,00,000 x 2
	Balance of GR = 4,00,000
	Now, General Reserve = 4,00,000 + 2,00,000
	GR = 6,00,000

Problem -9

Fromthefollowinginformation,preparetheBalanceSheetofABBLtd.Showingthedetailsof working:

Paid up capital	Rs. 50,000
Plant and Machinery	Rs. 1,25,000
Total Sales (p.a.)	Rs. 5,00,000
Gross Profit	25%
Annual Credit Sales	80%ofnetsales
Current Ratio	2
Inventory Turnover	4
Fixed Assets Turnover	2
Sales Returns	20% of sales
Average collection period	73 days
Bank Credit to trade credit	2
Cash to Inventory	1 : 15
Total debt to current Liabilities	3

Solution -9

1.NetSales =	Total Sales - Sales Return
	= 5,00,000 - 1,00,000
	= Rs. 4,00,000
2.CreditSales =	80% of Net Sales
	= 4,00,000 x 80%
	= Rs. 3,20,000
3.GrossProfit =	25% of Net sales
	= 4,00,000 x 25%
	= Rs. 1,00,000
4. Cost of Goods Sold =	Net Sales - Gross Profit
	= 4,00,000 - 1,00,000
	= Rs. 3,00,000
5.Inventory =	CostofGoodsSoldI / nventoryTurnover
	= 3,00,000 / 4
	= Rs. 75,000
6. Receivable Turnover =	365 / 73 =5

Receivables **=**	Credit SalesReceivables Turnover
	= 3,20,000 5
	= Rs. 64,000
7. Cash =	1/5 of Inventory
	= 1/5 x 75,000
	= Rs. 5,000
8.TotalCurrentAssets =	Inventory + Receivables + Cash
	= 75,000 + 64,000 + 5,000
	= Rs. 1,44,000
9.TotalCurrentLiabilities=	Current Assets2
	= 1,44,000 2
	= Rs. 72,000
10. BankCredit =	2/3 **x** Current Liabilities
	= 2/3 x 72,000
	= Rs. 48,000
11. TradeCredit =	1/2ofBankCredit OR1/3ofCurrentLiabilities
	Rs. 24,000
12. TotalDebt =	Current Liabilities x 3
	72,000 x 3
	= Rs. 2,16,000
13. Longtermdebt =	Total Debt - Current Liabilities
	= 2,16,000 - 72,000
	= Rs. 1,44,000
14. FixedAssets =	1/2 of Net Sales =
	1/2 x 4,00,000
	= Rs. 2,00,000
15. OtherfixedAssets =	Fixed Assets - Plant & Machinery
	= 2,00,000 - 1,25,000
	= Rs. 75,000
16. TotalAssets =	Fixed Assets + Current Assets

	= 2,00,000 + 1,44,000
	= 3,44,000
17. Networth =	Total Assets - Total Debt
	3,44,000 - 2,16,000
	= Rs. 1,28,000
18. Reserves&Surplus =	Net worth - Paid Up capital
	= 1,28,000 - 50,000
	= Rs. 78,000

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Paid Up Capital	50,000	Plant & machinery	1,25,000
Reserves & Surplus	78,000	Other Fixed Assets	75,000
Long term Debt	1,44,000	Inventory	75,000
Bank credit	48,000	Receivables	64,000
Trade credit	24,000	Cash	5,000
	3,44,000		**3,44,000**