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INTRODUCTION TO MANAGEMENT ACCOUNTING

Accounting

Accounting is involes the collection, recording, classificatio and presentation of financial data for the benefit of management and outside agencies, such as shareholders, creditor bankers and government.

Branches of Accounting

There are 3 branches of accounting which are
a. financial Accounting
b. Cost Accounting
c. Management Accounting

Financial Accounting

It is the science and art of recording and classifying business transactions and preparing summaries of the same for determining of the profit or loss in the year ending of the financial position of the concern

Functions of financial accounting

1. Recording of information

It is an art of recording financial facts of a concern. It is not possible to remember each and every transaction of the business

2. Classification of data

It is the data of one nature is placed at one place is called ledger.

3. Making summaries

It is to make summaries of recorded and classified data. It is used to prepare final accounts of a profit and loss account and balancesheet

4. Dealing with financial transactions

The transactions are recorded with are measurable in terms of money. Money is taken has a common medium and all economic transactions are expressed in terms of money

5. Interpreting financial information

Accounting information is modified in such a way that is interpreted by the management for drawing conclusions.

Limitations of financial accounting

1. **Historical nature**

It is historical in nature in the sense that it is recorded of all those transactions which have been taken place in the business during a particular period of time.

2. **Provides information about the concern as a whole**

Financial accounting information is recorded for the whole concern. One can find information about total expenses and total receipts only.

3. **Cost control not possible**

Cost control is not possible in financial accounting. The cost figures are known only at the end of the financial year or period.

4. **Technical subject**

It is a technical subject. The recording of transactions and making their use requires knowledge of accounting principles and conventions.

5. **Quantitative information**

It records only that information which can be quantitatively measured.

6. **Chances of manipulation**

There are chance of using financial accounts to suit the wings of management. The over valuation or under valuation of inventory may change the figures of profits.

Cost Accounting

Cost is incurred expenses. It means the classifying and appropriate allocation of expenditure for the determination of the cost of products or services, for the presentation of suitably arranged data for purposes of control and guidance of the management.

Objectives and functions of cost accounting.

1. **Analysis and ascertainment of cost**

The main object of costing is to ascertain the cost of each product, process, department, service or operation

2. **Presentation of cost for cost reduction and cost control**

Unless efficiently controlled, cost have a tendency to increase and cross the limits properly collected cost data helps in controlling and maintaining cost at the lowest.

3. **Planning and decision making**

It has developed beyond its traditional function of cost determination and cost control.

reports & documents that help management to make effective decisions related to their business performance.

It is used for internal purpose.

Management Accounting

It is the study of managerial aspect of accounting. It is to redesign accounting in such a way that it is a helpful to the management in formation of policy, control of execution and appreciation of effectiveness

Definitions of Management Accounting

Anglo american council of productivity defines "It is the presentation of accounting information in such a way to assist management in the creation of policy and the day today operation of an undertaking."

Robert. N. Anthony defines "It is concerned with accounting information that is useful to management".

Features of management accounting

The following are the main features of management accounting.

1. **Providing accounting information**

It is based on accounting information the collection and classification of data is the primary function of accounting department

2. **Cause and effection analysis**

It is limited to the preparation of profit and loss account and finding out the ultimate result.

3. Use of special techniques and concept
Management accounting uses special techniques and concepts to make accounting data more useful

4. Taking important decisions
It helps in taking various important decisions. It supplies necessary information to the management which may base its decisions on it

5. No fixed norms followed
In financial accounting certain rules are followed for preparing different accounting books. On the other hand no specific rules are followed in management accounting.

6. Increase in efficiency
The purpose of using accounting information is to increase efficiency of the concern. The efficiency can be achieved by setting up goals for each department or section.

7. Concerned with forecasting
The MA is concerned with the future. It helps the management in planning and forecasting.

Scope of Management Accounting

1. **Financial Accounting**
It deals with the historical data. The recorded facts about an organisation are useful for planning the future course of action

2. **Cost Accounting**
It provides various techniques for determining cost of manufacturing products or cost of providing service

3. **Financial Management**
It is concerned with the planning and control of the financial resources of the firm. It deals with raising of funds and their effective utilization.

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

5. **Inventory**
Inventory is used to denote stock of raw materials, goods in the process of manufacture and finished products

6. **Reporting to management**
One of the functions of management accountant is to keep the management informed of various activities of the concern so as to assist in controlling the enterprise.

7. Internal Audit

Internal audit system is necessary to judge the performance of every department. The actual performance of every department and individual is compared with the predetermined standards.

8 Tax accounting

It is the complex tax systems, tax planning is an important part of management accounting. It is informed about the tax burden from central government, state government and local authorities

Objectives of management accounting.

There are the primary objectives of management accounting

1. Planning and policy formulation

The object of management accounting is to supply necessary data to the management for formulating plans. Planning is essentially related to taking decisions for future

2. Helpful in controlling performance

It divides, unlike standard costing and budgetory control are helpful in controlling performance. The work is divided into different units and seperate goals are set up for each unit.

3. Helpful in organising

Organisation is related to the establishment of relationship among different individuals in the concern. It also includes the delegation of authority and fixing of responsibility.

4. Helpful in interpreting financial information

The main objective of management accounting is to present financial information to the management in such a way that it is easily understood.

5 Motivating employees

It helps the management in selecting best alternatives of doing the things. Target are laid down for the employees.

6. Reporting to management

One of the primary objectives of management accounting is to keep the management fully informed about the latest position of the concern.

7. Helpful in coordination

It provides tools which are helpful in coordinating, the activities of different sections or departments. Coordination is done through financial budgeting.

8. Helpful in tax administration

The tax system are increasing everyday. It helps in accessing various tax liabilities and depositing correct amount of taxes with the concerned authorities.

Functions of Management Accounting

1. **Planning and forecasting**
Management fixes various targets to be achieved by the business in near future. Planning and forecasting are essential for acheiving business objectives

2. **Modification of data**
It helps in modifying accounting data, the information is modified in such a way that it becomes useful for the management

3. **Financial analysis and interpretation**
It undertakes the job presenting financial data in a simplified way. Financial data is generally collected and presented in a technical way

4. **Facilitates managerial control**
It is very useful in controlling performance all accounting efforts are directed towards control of the enterprise. Standards of various departments and individual are set up.

5. **Communication**
It establishes communication within the organisation. The management accountant prepares reports for the benefit of different levels of management and employees

6. **Use of qualitative information**
The feild of management accounting is not restricting to use of monetary data monly. It collects and uses qualitative information also. while preparing a production budget, management accountant may not only use past production figures

7. Coordinating
It is among different department is essential for smooth running of the concern

8. Helpful in taking strategic decisions
It helps in taking strategic decisions. It supplies analytical information requiring various alternatives and the choice of management is made easy.

Difference between financial accounting and management accounting

Financial Accounting	Management Accounting
• The objective is to record various transactions and to know the financial position and to find out profit or loss at the end of the financial year	The main objective is to provide information to management for formulating policies and plans
• It is mainly concerned with accessing the results of the business as a whole	It deals seperately with different units, department and cost centre
• It is concerned with historical data	It deals with projection of data for the future
• The preparation of financial accounts is complusory in certain undertakings of a necessary.	It is not complusory
• Financial accounts reports are prepared not only for the benefit of the concern but also for outsiders	Management accounting reports are only for internal use
• It is governed by generally accepted principles and conventions	No set of principles are followed in management accounting

• It is prepared for a particular period	It supplies information from time to time during the whole year
• Financial accounts can be audited under company law and audit is compulsory	Management accounts need not to be audited

Difference between Cost Accounting and Management Accounting

Cost Accounting	Management Accounting
• The objective of cost accounting is to record the cost of producing a product	The purpose of management accounting is to provide information to the management for planning, coordinating.
• The scope is limited and it deals primarily with cost ascertainment	The scope is very wide it includes financial accounting, cost accounting, budgeting, tax planning etc.
• Cost accounting uses both past and present figures	It is generally concerned with the projection of figures for the future
• Only quantitative aspects is recorded	It uses both quantitative and qualitative information
• The development of cost accounting is related to industrial revolution.	It has developed only in the last 40 years
• Certain principles and procedures are followed for recording cost of different products	No specific rules and procedures are followed in reporting management accounting.

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RATIO ANALYSIS

Ratio Analysis

It is an expression of the quantity between two numbers.

Features or Objectives of Ratio Analysis

The following are the main objectives of Ratio Analysis

a. To analyse and access the liquidity position of the firm
b. To analyze the solvency and leverage of the firm
c. To access the earning capacity
d. To provide information for decision making and control
e. To provide information for making projections and estimates for the future
f. To access the overall efficiency and managerial effectiveness

Classification of Accounting Ratios

a. Traditional classification

Traditional classification

By

Balance sheet Ratio	Profit and loss statement ratio	Composite/ mixed ratio
- Current ratio	- Gross profit ratio	- Inventory/stock turnover ratio
- Liquid ratio	- net profit ratio	- Debtor turn over ratio
- Absolute liquidity ratio	- operating ratio	- Return on equity
- Debt equity ratio	- operating profit ratio	- Return on capital employed
- proprietory Ratio	- Expense ratio	- Return on share holders fund
- Capital gearing ratio	- Interest coverage ratio	- working capital turn over ratio
- Capital inventory/working		- Total asset turn ratio

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(i) Current ratio

It means the difference between current assests and current liabilities.

The formula is :

$$\frac{\text{Current Assets}}{\text{Current liabilities}} \quad \text{OR} \quad \frac{CA}{CL}$$

Current Assets	Current liabilities
Cash in hand	Sundry creditors
Cash at bank	Bills payable
Sundry debtors	Bank overdraft
Bills receivables	Outstanding Expenses
Closing stock	long-term debts
Marketable Securities	
Short-term investment	

(ii) Liquid ratio or quick ratio

It is more regress test of liquidity than the current ratio.

The formula is :

$$\text{Liquid ration} = \frac{\text{liquid assets}}{\text{Current liabilities}} \quad \text{or} \quad \frac{CA - \text{stock}}{CL}$$

Liquid liabilities = CL - BOD

Liquid Asset = CA - stock + prepaid expenses

(iii) Absolute liquid ratio

$$\frac{\text{Absolute liquid asset}}{\text{Current liabilities}} = \text{Absolute liquid ratio}$$

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(iv) Debt equity ratio

$$\text{Debt equity ratio} = \frac{\text{outsiders funds}}{\text{Shareholders funds}} \quad \text{OR} \quad \frac{\text{External equities}}{\text{Internal equities}}$$

(v) Proprietory ratio

$$\text{Proprietory ratio} = \frac{\text{Shareholders fund}}{\text{Total assets}}$$

(vi) Capital gearing ratio

$$\text{Capital gearing ratio} = \frac{\text{Equity share capital + Reserves \& surpl}}{\text{Preference share capital + long term debt}}$$

OR

(vii) Capital ~~Working capital~~ gearing ratio $= \frac{\text{Fixed income bearing funds}}{\text{Equity shareholders funds}}$

Q1. Calculate the current ratio. Current Assets of a concern Rs. 250000 and Current liabilities ₹ 100000

⇒ Current ratio = $\frac{\text{Current Assets}}{\text{Current liabilities}}$

$= \frac{250000}{100000} = 2.5$ times.

Current ratio = 2.5 : 1

2. Calculate the current ratio.
Cash in hand - ₹ 100000, debtors - ₹ 50000, creditors - ₹ 100000, closing stock ₹ - 150000, Bills payable ₹ 20000

⇒

Current Assets	Amt	Current liabilities	Amt
Cash in hand	100000	Creditors	100000
debtors	50000	Bills payable	20000
closing stock	150000		
Total	300000	Total	120000

$$\text{Current ratio} = \frac{CA}{CL} = \frac{300000}{120000} = 2.5 \text{ times}$$

Current ratio = 2.5 : 1

3. Calculate the current ratio from the following information

CA Inventories - ₹ 60000
CL Sundry Creditors - ₹ 20000
CL Bills payable - ₹ 15000
CA Cash and cash equivalents - ₹ 20000
CA Other current assets - ₹ 10000
✗ Land and building - ₹ 100000
✗ Goodwill - ₹ 50000
CA Sundry debtors - ₹ 70000

CA Bills receivable - ₹30000
CL Outstanding expenses - ₹7000
CL Bank overdraft - ₹25000
X Debentures - ₹75000
CL Short-term provisions - ₹18000

⇒

Current Assets	Amount	Current liabilities	Amount
Inventories	60000	Sundry creditors	20000
Cash and cash equivalent	20000	Bills payable	15000
Other current assets	10000	Outstanding expenses	7000
Sundry debtors	70000	Bank overdraft	25000
Bills receivable	30000	Short-term provisions	18000
Total	190000	Total	85000

$$\text{Current ratio} = \frac{CA}{CL} = \frac{190000}{85000} = 2.235 \text{ times}$$

Current ratio = 2.235 : 1

4. Calculate current ratio for the following -
CA Cash at bank - 25000
CA Sundry debtors - 20000
CA Inventories - 45000
Plant and machinery - ₹80000
CL Sundry creditors - 20000
CL Bills payable - ₹10000
CL Outstanding expenses - ₹10000
CA Cash and cash equivalents - ₹30000

⇒

Current Assets	Amount	Current liabilities	
Cash at bank	25000	Bills payable	10000
Inventories	45000	Sundry creditors	20000
Sundry debtors	20000	other expenses	10000
Cash and cash equivalent	30000		
Total	120000	Total	40000

$$\text{Current ratio} = \frac{CA}{CL} = \frac{120000}{40000} = 3 \text{ times}$$

Current ratio = 3:1

5. Calculate current ratio.

Sundry creditor - 7000
Sundry debtors - 9000
Cash in hand - 4000
Cash at bank - 6000
Inventory - 10000
Bills receivable - 5000
Bills payable - 4000
Marketable securities - 7000

⇒

Current Assets	Amt	Current liabilities	Amt
Sundry debtors	9000	Sundry creditors	7000
Cash in hand	4000	Bills payable	4000
Cash at bank	6000		
Inventory	10000		
Bills receivable	5000		
Marketable securities	7000		
	41000		11000

Current Ratio = $\frac{CA}{CL}$

$= \frac{41000}{11000} = 3.72$

Current ratio = 3.72 : 1

6. Ascertain the current ratio
Outstanding expenses - ₹1000
Closing stock - ₹10000
debtors - 12000
Creditors - 8000
Bills receivable - 4000
Bills payable - 3000

⇒

Current Assets	Amount	Current Liabilities	Amt
Closing stock	10000	Outstanding expenses	1000
debtors	12000	Creditors	8000
Bills receivable	4000	Bills payable	3000
Total	15000	Total	12000

Current ratio = $\frac{CA}{CL}$

$= \frac{15000}{12000} = 1.25$

Current ratio = 1.25 : 1

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Problems on Quick ratio or Acid Test ratio

$$\text{Quick Ratio} = \frac{QA}{CL}$$

Note:
Here, CA - stock and prepaid expenses = Quick Asset

1. Calculate quick ratio
Sundry debtors - 12000
Cash in hand - 10000
Stock - 8000
Creditors - 9000
Bills receivable - 5000
Bills payable - 7000
Prepaid rent - 8000

⇒

Quick Assets	Amount	Current liabilities	Amount
Debtor	12000	Creditor	9000
Cash in hand	10000	Bills payable	7000
Bills receivable	5000		
Total	27000	Total	16000

$$\text{Quick ratio} = \frac{QA}{CL}$$

$$= \frac{27000}{16000} = 1.68$$

Quick ratio = 1.68 : 1

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2. Calculate quick ratio from the information given below

CL Bank loan - £100000

CL Sundry creditors - £150000 CL

CL Bills payable - £20000 CL

CL Creditors for expenses - £10000 CL

X 6% debentures - 200000

X Plant & machinary - 300000

QA Stock in trade - 135000 CA

QA Sundry debtors - 70000 CA

QA Cash in hand - 15000 CA

QA Cash at bank - 110000 CA

QA Short term investment - 150000 CA

X Prepaid insurance - 5000

Ans ⇒

Quick Assets Items	Amount
Sundry debtors	70000
Cash in hand	15000
Cash at bank	110000
Short term investment	150000
	345000

Current liabilities Items	Amount
~~Bank loan~~	~~100000~~
Sundry creditors	150000
Bills payable	20000
Creditors for expenses	10000
	180000

* Quick ratio = $\frac{QA}{CL}$

$= \frac{345000}{180000} = 1.91$

Quick ratio = 1.91 : 1

* Quick assets = CA - Stock + PPE

= 480000 - 135000

= 345000

$QR = \frac{QA}{CL} = \frac{345000}{180000} = 1.96$

Quick ratio = 1.96 : 1

3. Calculate quick ratio or acid test ratio

CA:
- Sundry debtors - ₹ 25000
- Cash in hand - 15000
- Cash at bank - 20000
- Stock - 13000
- Prepaid expenses - 7000

Current liabilities - ₹ 30000

⇒ QA = CA - Stock + prepaid expenses

= 80000 - 13000 + 7000

= 80000 - 20000

= 60000

Quick ratio = $\frac{QA}{CL}$

= $\frac{60000}{30000}$ = 2

Quick ratio = 2 : 1

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Absolute liquid ratio

$$\text{Absolute liquid ratio} = \frac{\text{Absolute liquid asset}}{\text{Current liabilities}}$$

OR

$$\text{Cash and bank bank balance + short term investment} \over \text{Current liabilities}$$

1. Calculate absolute liquid ratio from the following information

Goodwill - ₹50000
Plant & machinery - 400000
Trade investment - 200000
ALR Marketable securities - 150000
Trade receivables - 40000
ALR Cash in hand - 45000
ALA Cash at bank - 30000
Inventories - 75000
CL Bank overdraft - 70000
CL Sundry creditors - 60000
CL Bills payable - 90000
CL Outstanding expenses - 30000

ALA - 225000
CL - 250000

Absolute liquid ratio = Absolute liquid Asset / Current liabilities

$$= \frac{225000}{250000} = 0.9$$

Absolute liquid ratio = 0.9:1

4. Calculate ALR

CALA Cash in hand - 20000

Stock - 10000

ALA Short term investment - 50000

CL Bills payable - 10000

CL Creditors - 30000

CL Bank overdraft - 15000

ALA Marketable securities - 45000

⇒ ALA = 115000

Current liabilites = 55000

$$ALR = \frac{ALA}{CL}$$

$$= \frac{115000}{55000} = 2.09$$

Absolute liquid ratio = 2.09 : 1

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Formula :

(i) Interest coverage ratio = $\frac{\text{EBIT}}{\text{Fixed interest charges}}$

(ii) Inventory turnover ratio = $\frac{\text{Cost of goods or Sales.}}{\text{Average inventory at cost}}$

OR

$\frac{\text{Sales}}{\text{Average inventory at selling price}}$

(iii) Debt turnover ratio = $\frac{\text{Net credit sales}}{\text{average debtors}}$

Average collection period [in terms of days] = $\frac{\text{Debtors}}{\text{Credit sales}} \times 365$ days

(iv) Fixed assets turnover ratio = $\frac{\text{Cost of sales}}{\text{Fixed assets at cost less accumulated depreciatio}}$

(v) Capital turnover ratio = $\frac{\text{Cost of sales}}{\text{Capital employed}}$

(vi) Gross profit ratio = $\frac{\text{Gross profit}}{\text{Net sales}} \times 100$

Gross profit = net sales - cost of goods sold.

(vii) Net profit ratio = $\frac{\text{net profit}}{\text{net sales}} \times 100$

(viii) Operating ratio = $\frac{\text{Cost of goods sold + operating expenses}}{\text{Net sales.}}$

(ix) Operating profit ratio = Operating net profit / net sales x100

(x) Return on investment = net profit before interest and tax / Total capital employed x100

(xi) Return on shareholders fund or proprietors equity
= net profit after interest and tax / shareholders fund x100

(xii) Return on equity capital = net profit after interest, tax and preference dividend / Equity shareholders fund

(xiii) Earnings per share = net profit after tax - preference dividend / No. of equity share

(xiv) Dividend payout ratio = Divident per ratio / Earnings per share

(xv) Dividend yield ratio = Divident per equity share / Market price per equity share

(xvi) Price earning ratio [P/E ratio] = Market price per equity share / Earnings per share.

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Q1. Calculate current ratio and quick ratio

Cash in hand - £10000

Sundry debtors - £20000

Bills receivable - £5000

Bills payable - £8000

Sundry creditors - £15000

Closing stock - £12000

Prepaid expenses - £8000

⇒ Current ratio = $\frac{\text{Current assets}}{\text{Current liabilities}}$, Quick ratio = $\frac{\text{Quick assets}}{\text{Current liabilities}}$

Current asset items	
Cash in hand	- 10000
Sundry debtors	- 20000
Bills receivable	- 5000
Stock	- 12000
Prepaid expenses	- 8000
Total	- 55000

Current liabilities items	
Sundry creditors	- 15000
Bills payable	- 8000
Total	- 23000

* Current ratio = $\frac{CA}{CL} = \frac{55000}{23000} = 2.39$

Current ratio = 2.39 : 1 //

* Quick ratio = $\frac{QA}{CL}$, QA = CA - Stock & PPE

QA = 55000 - 12000 + 8000

= 55000 - 20000

= 35000 //

Quick ratio = $\frac{35000}{23000}$

= 1.52 : 1 //

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The following is the balance sheet of bharath manufacturing company ltd as on 31st dec 2022.

Liabilities	Amount	Assets	Amount
Equity capital	48000	Plant and machinery	90000
Profit & loss a/c	12000	Sundry debtors CA	18000
debentures	30000	Stock CA	24000
Sundry creditors CL	46800	Cash at bank CA	4560
Provision for taxision CL	1200	Prepaid insurance CA	1440
Total	138000		138000

⇒

Current assets items	Amount
Sundry debtors	18000
Stock	2400
Cash at bank	4560
Prepaid insurance	1440
Total	48000

Current liabilities items	Amount
Sundry creditors	46800
Provision for taxision	1200
Total	48000

* Current ratio = $\frac{CA}{CL} = \frac{48000}{48000} = 1 = 1:1$

* Quick ratio = $\frac{QA}{CL} = \frac{22560}{48000} = 0.47$, 0.47:1

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3 The following is the balance sheet of kalyani ltd as on 30th june 2023

	Liabilities	Amount	Assets	Amt
	Equity capital	300000	Land & building.	150000
CL	Sundry creditors	48000	Plant & machinery	85000
CL	Bills payable	10000	Short-term investment CA	16000
CL	Bank overdraft	5000	Stock in trade CA	50000
CL	Outstanding expenses	2000	Debtors CA	59000
			Prepaid expenses CA	1000
			Cash in hand CA	4000
	Total	365000	Total	365000

Calculate current ratio and quick ratio

⇒

Current assets item	
Short-term investment	-16000
Stock in trade	- 50000
Debtors	- 59000
Prepaid expenses	- 1000
Cash in hand	- 4000
Total	130000

Current liabilities item	
Sundry creditors	- 48000
Bills payable	10000
BOD	- 5000
O/s expenses	- 2000
Total	65000

* Quick ratio = QA / CL , QA = CA - Stock + PPE

= 130000 - 50000 + 1000

= 79000 / 65000 = 1.21 = 79000

= 1.21 : 1

* Current ratio = CA / CL = 130000 / 65000 = 2 :

= 2 : 1

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4. X ltd has current ratio of 4.5:1 and quick ratio 3:1 if its inventory is ₹60000, find out its total current asset and total current liabilities

⇒ Inventory = 60000
Current ratio = 4.5:1
Quick ratio = 3:1
Current asset = 4.5
Current liabilities = 1
Quick asset = 3

The difference between Current ratio and Quick ratio of inventory.

$60000 = 4.5 - 3$

$60000 = 1.5$

$CA = 60000 \times \frac{4.5}{1.5} = 180000$//

$CL = 60000 \times \frac{1}{1.5} = 40000$//

$QA = 60000 \times \frac{3}{1.5} = 120000$//

Proprietory / Liquid ratio

proprietory ratio = $\frac{\text{shareholders fund}}{\text{Total assets}}$

Q1. Calculate proprietory ratio from the following balance sheet.

Liabilities	Amount	Assets	Amount
Equity share capital	150000	Fixed assets	250000
Preference share capital	200000	Cash in hand	35000
Profit for the year	50000	Bills receivable	15000
Sundry creditors	30000	Stock	60000
Bills payable	20000	Sundry debtors	100000
Provision for tax	10000		
Total	460000	Total	460000

Shareholders funds
Equity share capital - 150000
Profit & loss a/c - 50000
Preference share capital - 200000
Total 400000

Proprietory ratio = $\frac{\text{shareholders funds}}{\text{Total assets}}$

$= \frac{400000}{460000}$

$= 0.86$

Proprietory ratio = 0.86:1

2. Calculate proprietory ratio from the following balance sheet

Liabilities	Amount	Assets	Amount
Share capital	250000	Cash in hand	50000
Reserves and surplus	150000	Plant and machinery	100000
Creditors	100000	Land and building	100000
Profit for the year	50000	debtors	25000
		Furniture	75000
		Goodwill	100000
		Investment	100000
Total	550000	Total	550000

a. Proprietory ratio = $\frac{\text{Shareholders funds}}{\text{Total assets}} = \frac{450000}{550000} = 0.81$

$= \boxed{0.81 : 1}$

Shareholders funds
Share capital - 250000
Reserves & Surplus - 150000
Profit for the year - 50000
Total - 450000

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3. Ram Ltd for the following data as on 31-3-22.

Liabilities	Amount	Assets	Amount
Share capital	185000	Cash in hand	12000
Preference share capital	125000	Sundry debtors	100000
Reserves & surplus	85000	Bills receivable	25000
Sundry creditors	42000	stock in trade	65000
Bills payable	30000	Marketable securities	90000
Outstanding expenses	5000	Plant & machinery	180000
6% debentures	100000	Land & building	100000
Total	572000	Total	572000

Calculate current ratio, acid test ratio, absolute liquid ratio and proprietory ratio

⇒

Current assets items
Cash in hand - 12000
Sundry debtors - 100000
Bills receivable - 25000
Stock in trade - 65000
Marketable securities - 90000
Total - 292000

Current liabilities items
Sundry creditors - 42000
Bills payable - 30000
outstanding expenses - 5000
Total - 77000

a. Current ratio = $\frac{CA}{CL} = \frac{292000}{77000} = 3.79$

CR = 3.79 : 1

QA = Total current assets - stock = 292000 - 65000 = 227000.

b. ATR/QR = $\frac{QA}{CL} = \frac{227000}{77000} = 2.94$

QR = 2.94 : 1

QA = CA - stock
= 292000 - 65000 = 227000

c. ALR = $\frac{ALA}{CL} = \frac{102000}{77000} = 1.32$

ALR = 1.32 : 1

ALA items
Cash in hand - 12000
Marketable securities - 90000
Total - 102000

d. Proprietory ratio = $\frac{\text{Shareholders fund}}{\text{Total assets}} = \frac{395000}{572000} = 0.69$

Shareholder funds
Share capital - 185000
Preference share - 125000
Reserves & surplus - 85000
Total - 395000

PR = 0.69 : 1

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11. Stock Turnover Ratio

Stock Turnover ratio = Cost of goods sold / Average stock

Cost of goods sold = Sales - gross profit

Average stock = (opening stock + closing stock) / 2

COGS = O/P stock + purchase + direct exp - C/P stock

Q1. Calculate STR

Sales - 185000, Gross profit - 45000, opening stock - 50000 and closing stock - 40000

⇒ Cost of goods sold = Sales - Gross profit

= 185000 - 45000

= 140000

* Average stock = (opening stock + closing stock) / 2

= (50000 + 40000) / 2

= 45000

STR = Cost of goods sold / Average stock = 140000 / 45000 = 3.1:1

12. Trading account for the year ended 31-3-2010 is as follows. Calculate stock turnover ratio.

Particulars	Amount	Particulars	Amount
To opening stock	30000	By sales	200000
To purchases	150000	By closing stock	60000
To wages	10000		
To freight	20000		
To gross profit	50000		
Total	260000	Total	260000

Calculate stock turn over ratio.

⇒ * Cost of goods sold = sales - gross profit
= 200000 - 50000
= 150000

* Average stock = $\frac{\text{opening stock + closing stock}}{2}$

= $\frac{30000 + 60000}{2} = \frac{90000}{2} = 45000$

a. Stock turnover ratio = $\frac{\text{Cost of goods sold}}{\text{Average stock}}$

= $\frac{150000}{45000} = 3.3$

STR = 3.3 : 1

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3. Rakesh and company supplies the following information for the year ending 31st march 2021.
Credit sales - Rs 150000, cash sales - 250000, return inwards - Rs 25000, Opening stock - Rs. 25000, closing stock - Rs. 35000.

find out stock or inventory turn over ratio when gross profit ratio is 20%.

⇒ Total sales = cash sales + credit sales - returns
= 250000 + 150000 - 25000
= 375000

* Gross profit = 375000 x 20% = 75000

* Cost of goods sold = sales - Gross profit
= 375000 - 75000
= 300000

* Average stock = $\frac{\text{opening stock} - \text{closing stock}}{2}$

= $\frac{25000 + 35000}{2}$ = 30000

* Stock turnover ratio = $\frac{\text{COGS}}{\text{Average stock}}$ = $\frac{300000}{30000}$ = 10

STR - 10:1

4. If inventory turn over ratio is 5 times and average stock at cost is Rs. 75000. Find out cost of goods sold.

⇒ $STR = \frac{COGS}{\text{Average stock}}$

$5 = \frac{COGS}{75000.}$

$COGS = 75000 \times 5$

$COGS = 375000$ //.

Debtors Turnover Ratio

Debtors turnover ratio = $\frac{\text{Total net credit sales}}{\text{Average trade receivable}}$

Average trade receivable = $\frac{\text{openings debtors + B/R + closing drs + B/R}}{2}$

Q1. Annual revenue from operation [credit sales] - Rs. 25000
Sales return - Rs. 1000
Debtors - 6000
B/R - 2000

⇒ Debtors turnover ratio = $\frac{\text{Total net credit sales}}{\text{Average trade receivable}} = \frac{24000}{8000} = 3$

Total net credit sales = 25000 - 1000 = 24000

Average trade receivable = Debtors + B/R = 6000 + 2000 = 8000.

DTR = 3:1

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2. Calculate debtor turnover ratio

Total sales - ₹56000, sales return - ₹6000, opening debtors & B/R - ₹10000, closing dr & B/R - ₹8000 and carriage inwards - ₹3000.

⇒ Debtors turnover ratio = $\frac{\text{Total net credit sales}}{\text{Average trade receivable}}$

$= \frac{50000}{9000} = 5.5$ "

Total net credit sales = Total sales - sales return

= 56000 - 6000

= 50000

Average trade receivable = $\frac{\text{opening drs \& B/R} + \text{closing drs \& B/R}}{2}$

$= \frac{10000+8000}{2} = \frac{18000}{2} = 9000.$

∴ DTR = 5.5 : 1

3.

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AVERAGE COLLECTION PERIOD RATIO

Average collection period ratio = $\frac{\text{Trade receivable}}{\text{Net credit revenue from operation per day}}$

- Trade receivable = ⅓ debtors and bills receivable.

Q1. From the following information calculate average collection period
Total revenue from operations - Rs. 100000
Cash revenue from operations - Rs. 20000
Sales returns - Rs. 7000
Total debtors at the end of the year - Rs. 11000
Bills receivable - Rs. 4000
Bad debts provision - Rs. 1000
Sundry creditors - Rs. 10000

⇒ Average collection period ratio = $\frac{\text{Trade receivable}}{\text{Net credit revenue from operation per day}}$

- Trade receivable = Debtors + Bills receivable = 11000 + 4000 = 15000.
- Calculation of net credit revenue

Total revenue	= 100000
(-) Cash revenue	- 20000
	80000
(-) Sales return	- 7000
	= 73000

$$ACPR = \frac{15000}{73000} \times 365$$

$$= 74.9 \text{ or } \$ 75 \text{ days appx.}$$

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Date :

2 Calculate average collection period

Sales turn over [revenue] - Rs. 85000

Return inwards - Rs. 5000

Return outwards - Rs. 6000

Total debtors - Rs. 22000

Total B/R - Rs. 8000.

⇒ Average collection period ratio = $\frac{\text{Trade receivable}}{\text{Net credit revenue from operation per d}}$

Trade receivable = drs + B/R

= 22000 + 8000

= 30000

Net credit revenue

Total revenue - 85000

(-) Sales return - 5000

80000

$= \frac{30000}{80000} \times 365$

= 136.8 or 137 days appro

Payable / Creditors Turnover Ratio

Creditors / payable turnover ratio = Total net credit purchase / Average payable

* Net credit purchase = Total purchase - purchase return
* Average payable = (opening drs & B/P + closing drs & B/P) / 2

Q. From the following information calculate payable turnover ratio
Total purchases - Rs. 400000
Cash purchase - Rs. 50000
Purchase returns - Rs. 20000
Creditors at the end - Rs. 60000
Bills payable at the end - Rs. 20000

⇒ Net credit purchase = Total purchase - Cash purchase - purchase return
= 400000 - 50000 - 20000
= 330000,

• Average payable = closing drs + B/P = 60000 + 20000 = 80000,

Payable turnover ratio = Total net credit purchase / Average payable
= 330000 / 80000 = 4.125,,

Payable turnover ratio = 4.125,,

2. Calculate creditor turnover ratio

Total purchase - Rs. 250000

Purchase returns - Rs. 10000

Opening Crs & B/P - Rs. 15000

Closing Crs & B/P - Rs. 13000

⇒ 1. Net credit purchase = Total purchase - purchase returns

= 250000 - 10000

= 240000

• Average payable = $\frac{\text{Opening Crs \& B/P + Closing Crs + B/P}}{2}$

= $\frac{15000 + 13000}{2}$ = $\frac{28000}{2}$ = 14000.

= Creditor turnover ratio = $\frac{\text{Total net credit purchase}}{\text{Average payable.}}$

= $\frac{240000}{14000}$

Creditor turnover ratio = 17.14.

Profitability Ratio.

Generally the profitability ratios are classified into six categories.

- Gross profit ratio
- Operating ratio
- Operating profit ratio
- Expenses ratio
- Net profit ratio
- Cash profit ratio

- **Gross profit ratio**

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

- **Operating ratio**

COGS = sales - gross profit

$$\text{Operating ratio} = \frac{\text{Cost of goods sold + operating expenses}}{\text{sales / net revenue from operation}} \times 100$$

- **Operating profit ratio**

$$\text{Operating profit ratio} = \frac{\text{Operating profit}}{\text{sales / net revenue from operation}} \times 100$$

Operating profit = Sales - cost of goods sold + office and administrative expenses + selling & distribution expenses.

- Expenses ratio

$$\text{Expenses ratio} = \frac{\text{Particular expenses}}{\text{net sales}} \times 100$$

- Net profit ratio

$$\text{Net profit ratio} = \frac{\text{Net profit}}{\text{net sales}} \times 100$$

- Cash profit ratio

$$\text{Cash profit ratio} = \frac{\text{Cash profit}}{\text{net sales}} \times 100$$

Cash profit = net profit + depreciation and other non cash expenses

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Date :

Q1. The following is the profit & loss a/c of Mr. X for the year ended 31st March 2021.

Dr.

Particulars	Amount	Particulars	Amount
To opening stock	100000	By sales	560000
To purchases	350000	By closing stock	100000
To wages	9000		
To Gross profit c/d	201000		
Total	660000	Total	660000
Administrative expenses	20000	By Gross profit b/d	201000
Selling & distribution expenses	89000	By Interest on investment	10000
Non-operating expenses	30000	By profit on sales of investment	8000
To net profit	80000		
Total	219000	Total	219000

Calculate Gross profit ratio, net profit ratio, operating ratio, operating profit ratio and administrative expenses ratio

a. Gross profit ratio = $\frac{\text{Gross profit}}{\text{net sales}} \times 100$

$= \frac{201000}{560000} \times 100$

$= 35.89\%$

b. Net profit ratio = $\frac{\text{net profit}}{\text{net sales}} \times 100$

$= \frac{80000}{560000} \times 100$

$= 14.28\%$

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Date :

c. Operating ratio

COGS = Sales - Gross profit
= 560000 - 201000
= 359000

Operating expenses = administrative exp + S&D expenses = 20000 + 89000
= 109000

$$\text{Operating ratio} = \frac{\text{COGS + operating expenses}}{\text{Sales}} \times 100$$

$$= \frac{359000 + 109000}{560000} \times 100$$

= 83.57 %

d. Operating profit ratio

$$\text{Operating profit ratio} = \frac{\text{Operating profit}}{\text{Sales}} \times 100$$

$$= \frac{310000}{560000} \times 100$$

= 55.35 %

Operating profit = COGS - Sales + administrative expenses + S & D expenses
= 359000 - 560000 + 20000 + 89000
= 310000

e. Administrative expenses ratio

$$\text{Administrative expenses ratio} = \frac{\text{administration expenses}}{\text{Sales}} \times 100$$

$$= \frac{20000}{560000} \times 100$$

= 3.57 %

2. From the following particulars of X com ltd as on 31st march 2020.

Dr

Particulars	Amount	Particulars	Amount
To opening stock	50000	By sales	120000
To purchase	45000	By closing stock	50000
To carriage inwards	10000		
To Gross profit c/d	65000		
Total	170000	Total	170000
To salary	5000	By Gross profit b/d	65000
Office expenses	60000	By interest on investments	35000
~~interest~~ selling expeses	35000	By sale of building	50000
To net profit	50000		
Total	150000	Total	150000

Calculate Gross profit ratio, net profit ratio, operating ratio, office and selling expenses ratio, operating profit ratio

a. Gross profit ratio

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{net sales}} \times 100$$

$$= \frac{65000}{120000} \times 100$$

$$= 54.16\%$$

b. Net profit ratio

$$\text{Net profit ratio} = \frac{\text{net profit}}{\text{net sales}} \times 100$$

$$= \frac{50000}{120000} \times 100$$

$$= 41.66\%$$

c. Operating ratio

$$\text{Operating ratio} = \frac{\text{COGS + operating expenses}}{\text{Sales}} \times 100$$

$$= \frac{55000 + 95000}{120000} \times 100$$

$$= 125\%$$

COGS = Sales - Gross profit
= 120000 - 65000 = 55000

Operating expenses = Office exp + selling exp
= 60000 + 35000
= 95000

d. Operating profit ratio

$$\text{Operating profit ratio} = \frac{\text{Operating profit}}{\text{Sales}} \times 100$$

$$= \frac{-30000}{120000} \times 100$$

$$= -25\%$$

Operating profit = Sales - COGS + office expense + selling exp.
= 120000 - 55000 + 60000 + 35000
= 120000 - 150000
= -30000

e. Office and selling expenses ratio

$$\text{Office and selling expenses ratio} = \frac{\text{office \& selling exp}}{\text{Sales}} \times 100$$

$$= \frac{60000 + 35000}{120000} \times 100$$

$$= 79.16\%$$

3.

Particulars	Amount	Particulars	Amount
Sales [revenue from operation]	520000	Administration exp:	
Purchases	322250	Salaries OAE	27700
Opening stock	76250	Rent OAE	2700
Closing stock	98500	Stationery, postage, etc OAE	2500
Sales return	20000	Depreciation OAE	9300
Selling & distribution exps:		Other charges OAE	16500
Salaries SDE	15300	Non-operating Income:	
Advertising SDE	4700	Dividend on shares	9000
Travelling SDE	2000	Profit on sale of asset	3000
		Non-operating expenses	
		Loss on sale of shares	4000

a. Rearrange the above figures in a form suitable for analysis and

b. Show the following ratios

(i) Gross profit ratio (ii) Operating ratio (iii) Stock turnover ratio

⇒ Trading Account

Particulars	Amount	Particulars	Amount
To opening stock	76250	By sales [520000]	
To purchases	322250	(-) sales return [20000]	500000
To Gross profit c/d.	200000	By closing stock	98500
Total	598500	Total	598500

Date :

(i) Gross profit ratio = $\frac{\text{Gross profit}}{\text{Sales}} \times 100$

$= \frac{200000}{500000} \times 100$

$= \boxed{40\%}$

(ii) Operating ratio

Operating ratio = $\frac{\text{COGS + operating expenses}}{\text{Sales}} \times 100$

$= \frac{300000 + 80700}{520000}$

$= \frac{380700}{520000} \times 100 = \boxed{76\%}$

COGS = Sales - Gross profit

= 520000 - 200000

= 300000

Operating exp = O&A exp + S&D exps

= 58700 + 22000

= 80700

(iii) Stock turnover ratio

Stock turnover ratio = $\frac{\text{COGS}}{\text{Average stock}}$

$= \frac{300000}{87375}$

$= \boxed{3.43}$

Average stock = $\frac{\text{opening stock + closing stock}}{2}$

$= \frac{76250 + 98500}{2}$

$= \frac{87375}{}$

4. The following is the rearranged revenue statement of a ltd. company for the year ending 31st march 2021

Particulars	Amount
Sales / Revenue from operations	600000
Less: Cost of revenue	400000
Gross profit	200000
Less: Operating expenses	120000
Operating profit	80000
Add: Non-operating income	12000
	92000
Less: Non-operating expenses	4000
Net profit	88000

Calculate (i) Gross profit ratio (ii) Operating ratio (iii) Operating profit ratio (iv) Net profit ratio

⇒ (i) Gross profit ratio

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

$$= \frac{200000}{600000} \times 100$$

$$= 33.33\%$$

(ii) Operating ratio

$$\text{Operating ratio} = \frac{\text{COGS} + \text{operating expenses}}{\text{Sales}} \times 100$$

$$= \frac{400000 + 120000}{600000} \times 100 = 86.67\%$$

COMPASS

Date :

COGS = Sales - Gross profit
= 600000 - 200000
= 400000

(iii) Operating profit ratio

Operating profit ratio = Operating ratio - 100
= 86.67 - 100
= 13.33%.

(iv) Net profit ratio

net profit ratio = $\frac{\text{net profit}}{\text{sales}} \times 100$

= $\frac{88000}{600000} \times 100$

= 14.67%.

5. ~~The extracts of financial statements of a company for the past three years was summarised below.~~

5. From the following information given below
Calculate Gross profit ratio, net profit ratio, current ratio, quick ratio, operating ratio, operating profit ratio and stock turnover ratio.

Opening stock - ₤ 25500
Prepaid expenses - ₤ 1000
Closing stock - ₤ 48500
Wages - ₤ 8000
Purchases less returns = 50000
Sales - ~~200~~ 204000
Sales returns - 4000
Office and administration exp - 40000
Selling and distribution exp - 35800
Sundry debtors - 22000
Sundry creditors - 18000
Bills receivable - 7000
Bills payable - 9000
Bank overdraft - 6000

⇒ (i) Gross profit ratio

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

$$= \frac{165000}{200000} \times 100$$

$$= 82.5\%$$

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Date :

Trading A/c and Profit & loss a/c

Dr

Particulars	Amount	Particulars	Amount
To opening stock	25500	By sales 204000	
To purchases	50000	⊖ sales returns 4000	200000
To wages	8000	By closing stock	48500
To Gross profit c/d	165000		
Total	248500	Total	248500
To Selling & distrib. exp	35800	By Gros profit b/d	165000
To Office & addmi. exp.	40000		
To net profit c/d	89200		
Total	165000	Total	165000

(ii) Net profit ratio

$$\text{net profit ratio} = \frac{\text{Net profit}}{\text{Sales}} \times 100$$

$$= \frac{89200}{200000} \times 100$$

$$= 44.6\%$$

(iii) Current ratio

Current Assests items		Current liabilities items	
closing Stock	48500	Sundry creditors	18000
Sundry debtors	22000	Bills payable	9000
Bills receivable	7000	Bank overdraft	6000
Prepaid expenses	1000		
Total	78500	Total	33000

Current ratio = $\frac{\text{Current assets}}{\text{Current liabilities}}$

$= \frac{78500}{33000}$

$= 2.37$ times.

Current ratio = 2.37 : 1 //

(iv) Quick ratio

QA = Current assets - prepaid expenses & closing stock

$= 78500 - 1000 + 48500$

$= 29000$

Quick ratio = $\frac{\text{Quick assets.}}{\text{Current liabilities}}$

$= \frac{29000}{33000}$

$= 0.87$

Quick ratio = 0.87 : 1 //

(v) Operating ratio

COGS = Sales - Gross profit

$= 200000 - 165000$

$= 35000$

Operating exp. = admin exp + selling exp

$= 40000 + 35800$

$= 75800$

Operating ratio = $\frac{\text{COGS + Operating expenses}}{\text{Sales}} \times 100$

$= \frac{35000 + 75800}{200000} \times 100$

$= 55.4\%$ //

(vi) Operating profit ratio

Operating profit = Sales - COGS + O&A exp + S&D exp
= 200000 - [35000 + 40000 + 35800]
= 200000 - 110800
= 89200

Operating profit ratio = 100 - operating ratio
= 100 - 55.4
= 44.6 % //

OR

Operating profit ratio = $\frac{\text{Operating profit}}{\text{Sales}} \times 100$

= $\frac{89200}{200000} \times 100$

= 44.6 % //

(vii) Stock turnover ratio

Stock turnover ratio = $\frac{\text{COGS}}{\text{Average stock}}$

= $\frac{35000}{37000}$

= 0.94 //

Average stock = $\frac{\text{Opening stock} + \text{closing stock}}{2}$

= $\frac{25500 + 48500}{2}$

= 37000

6. Calculate Gross profit, net profit ratio, operating ratio, operating profit ratio, stock turnover ratio, current ratio, acid test ratio or quick ratio

Sundry debtors	20000
Sundry creditors	17000
B/R	5000
B/P	6000
Opening stock	35000
closing stock	60000
Cash in hand	10000
O & A expenses	35000
S & D expenses	40000
Purchases	45000
Sales	70000
Carriage inwards	2000
Bad debts	3000

⇒ Dr Trading a/c and profit & loss a/c Cr

Particulars	Amount	Particulars	Amount
To opening stock	35000	By sales	70000
To purchases	45000	By closing stock	60000
To carriage inwards	2000		
To Gross profit c/d	48000		
Total	130000	Total	130000
To office & admin, expenses	35000	By Gross profit b/d	48000
To selling & distribution exp.	40000	By net loss c/d	30000
To bad debts	3000		
Total	78000	Total	78000

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Date :

(i) Gross profit ratio :

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

$$= \frac{48000}{70000} \times 100$$

$$= 68.57\%$$

(ii) Net profit ratio

$$\text{Net profit ratio} = \frac{\text{net profit}}{\text{net sales}} \times 100$$

$$= \frac{-30000}{70000} \times 100$$

$$= -42.85\%$$

(iii) Operating ratio

COGS = Sales - Gross profit

= 70000 - 48000

= 22000

Operating expenses = admin. expt + selling exp

= 35000 + 40000

= 75000

$$\text{Operating ratio} = \frac{\text{COGS} + \text{Operating expenses}}{\text{Sales}} \times 100$$

$$= \frac{22000 + 75000}{70000} \times 100$$

$$= \frac{97000}{70000} \times 100$$

$$= 138.57\%$$

(iv) Operating profit ratio.

Operating profit ratio = 100 - operating ratio
= 100 - 138.57
= 38.57 %.

OR

Operating profit = Sales - COGS + admin exp + selling exp
= 70000 - [22000 + 35000 + 40000]
= 70000 - 97000
= - 27000

Operating profit ratio = $\frac{\text{Operating profit}}{\text{Sales}} \times 100$

= $\frac{-27000}{70000} \times 100$

= - 38.57 %.

(v) Stock turnover ratio

Stock turnover ratio = $\frac{\text{COGS}}{\text{Average stock}}$

= $\frac{22000}{47500}$

= 0.46 times.

Average stock = $\frac{\text{Opening stock + closing stock}}{2}$

= $\frac{35000 + 60000}{2}$

= 47500

(vi) Current ratio

Current assets items
Cash in hand - 10000
Sundry debtors - 20000
Bills receivable - 5000
Closing stock - 60000
Total - 95000

Current liabilities items
Sundry creditors - 17000
Bills payable - 6000
Total - 23000

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$= \frac{95000}{23000}$$

$$= 4.13 \text{ times}$$

CR = 4.13 : 1

(vii) Quick ratio

Quick assets = Current assets - closing stock

= 95000 - 60000

= 35000

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

$$= \frac{35000}{23000}$$

$$= 1.52 \text{ times}$$

QR = 1.52 : 1

CASH FLOW ANALYSIS

Cash Flow Statement

A cash flow statement is a statement of changes in the financial position of a firm on cash basis. It shows the various sources of cash inflows and cash outflows during a years.

Differences between cash flow statement and fund flow statement

Cash Flow statement	Fund flow statement
• Concerned with changes in cash position	Concerned with changes in working Capital
• More useful to management	less useful to management
• To prepare, an increase in current liability or decrease in current asset result in ~~decrease in working capital~~ increase in cash & vice-versa	To prepare, an increase in current liability or decrease in current asset result in decrease in net working capital and vice-versa.
• Is not followed by changes in working capital	Is followed by changes in working capital
• Contains opening & closing balances of cash and cash equivalents	Does not contain any opening or closing balance
• Should be prepared as per AS-3 as required by SEEBI.	No legal requirement for preparation.

Uses of CFS

To evaluate the current cash position

To know the future cash positio

To take ~~fast~~ financial loan

Short-term Financial position

Explains poor cash position

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COMPASS

Date :

Cash inflow and Cash outflow

Cash inflow increases cash while cost outflow decreases cash

Classification of Cash flows statement

1. Operating Activities
2. Financing Activities
3. Investing Activities.

a. Operating Activities

Cash flows from these activities result for transactions and other events that enter into determination of net profit or loss.
Example of cash flows from operations are :

Cash inflows	Cash outflows
• Cash from sales & debtors • Cash from royalty, commision, fee, interest & dividend receipt	Cash for purchases and creditors Cash for wages, salaries, tax, etc.

b. Financing Activities

These are the activities that result in changes in size and composition of the owners capital and borrowing of the enterprise.
Example of cash flows arising from financing activities are :

Cash inflows	Cash outflows
• Cash receipts from issue of shares and debentures etc. • Cash receipt from loans raised	• Buy back of shares, debentures • Payment of dividend, interest, etc.

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Date :

c. Investing Activities

These are the acquisitions and disposal of long term assets and other investments not included in cash equivalents. Examples of cash flow arising from investment activities are

Cash inflow	Cash outflow
• Sale of fixed asset, shares etc	Purchase of fixed assets
• Receipts from dividends, interest etc	Purchase of shares etc. for investment.

Note:

a. Order followed for presenting the cash flow is to show operating activities followed by investing activities and then financing activities

b. The net cash flow from an operating, investing and financing activities can be positive or negative. Positive cash flow means net inflow. negative cash flow means net outflow.

c. Any inflow or outflow between cash, bank and cash equivalents is not taken as cash flow. Example, cash deposited in bank is not a cash flow.

d. The sum of net inflows or outflows of all the activities represents an increase or decrease in cash flows. which is reconciled with opening and closing balance of cash.

Operating Activities

Format of cash from operating activities.

Particulars	Amount	Amount
Net profit for the year		XXX
Add: Non cash & non-operating expense		
Depreciation	XXX	
Goodwill written off	XXX	
Preliminary expenses written off	XXX	
Share discount written off	XXX	
Loss on sale of fixed assets, investment	XXX	
Provision for taxation	XXX	
Less: Non-cash & non operating incomes		
Profit on sale of fixed asset	XXX	~~XXX~~ XXX
Add: ↑current liabilities ↓current assets	XXX	
less: ↑current assets ↓current liabilities	XXX	
Income tax paid	XXX	XXX
Cash from operating expenses.		XXX

Date :

Q1. Calculate cash from operating activities from the following.

	2021	2022
Profit & loss Account	60000	65000
CA Debtors	85000	48000
CA Bills receivable [B/R]	40000	81000
add General reserve N cash	172000	207000
CL Wages o/s	26000	8000
CA Salaries prepaid	8000	10000
Goodwill N. cash	70000	60000

⇒ Cash from operating activities

Particulars	£	Amount
Net profit for the year [60000 - 65000]		5000
Add: Non cash & non-operating expenses		
General reserve [172000 - 207000]	35000	
Goodwill [70000 - 60000]	10000	45000
		50000
Add: ↑CL ↓CA		
Debtors [CA] [85000 - 48000]	37000	37000
		87000
Less: ↑CA ↓CL		
B/R [CA] [40000 - 81000]	41000	
o/s wages [CL] [26000 - 8000]	18000	
Prepaid salary [CA] [8000 - 10000]	2000	61000
Cash from operating activities		26000

2. From the followings balances calculate cash from operations

	Particulars	31-12-21	31-12-22
CA	Bills receivable	50000	47000
CA	Debtors	10000	12500
CL	Bills payable	20000	25000
CL	Creditors	8000	6000
CL	o/s expenses	1000	1200
CA	Prepaid expenses	800	700
CA	Accrued income	600	750
CL	Income received in advance	800	250
	Profit made during the yr	nil	70000

Calculation of Cash from operating activities

Particulars	£	Amt
Profit made during the year		70000
Add: ↑CL ↓CA		
[CA] Bills receivable [50000 - 47000]	3000	
[CL] Bills payable [20000 - 25000]	5000	
[CL] o/s expenses [1000 - 1200]	200	
[CA] Prepaid expenses [800 - 700]	100	
[CL] Accrued income [600 - 750]	150	
[CA] Income received in advance (800 - 250)	550	9000
		79000
Less: ↑CA ↓CL		
[CA] debtors [10000 - 12500]	2500	
[CL] Creditors [8000 - 6000]	2000	4500
Cash from operating activities		74500

Date :

3. Following information is available from the books of standard Company Limited.

	Particulars	2021	2022
	Profit made during the year	nil	250000
add CA	Income received in advance	600	500
less CA	Prepaid expenses	1400	1600
add CA	Debtors	95000	80000
less CA	B/R	20000	25000
add CL	Creditors	40000	45000
Less CL	Bills payable	15000	13000
add CL	O/s expenses	2000	2500
add CL	Accured income	1200	1500

Calculate cash flow from operations.

Particulars	₹	Amount
Profit made during the year		250000
Add: ↑CL ↓CA		
Income received in advance (600-500)	100	
Debtors (95000 - 80000)	15000	
Creditors [40000 - 45000]	5000	
O/s expenses [2000 - 2500]	500	
Accured income [1200 - 1500]	300	20900
		270900
Less: ↑CA↓CL		
Prepaid expenses [1400 - 1600]	200	
Bills receivable [20000 - 25000]	5000	
Bills payable [15000 - 13000]	2000	7200
		263700

4. From the following calculate cash from operation
Profit & loss a/c for the year ended 31-3-22

Dr

Particulars	Amount	Particulars	Amount
To salaries	5000	By Gross profit	25000
To rent	1000	By profit on sale of land	5000
To depreciation	2000	By income tax refund	3000
To loss on sale of plant	1000		
To Goodwill return off	4000		
To proposed divident	5000		
To provision for tax	5000		
To net profit	10000		
Total	33000	Total	33000

Calculation of Cash flow from operating activities

Particulars	₹	Amount
Profit for the year		10000
Add:- non cash & non-operating expenses		
Depreciation	2000	
Loss of sale of plant	1000	
Goodwill return off	4000	
Proposed divident	5000	
Provision for tax	5000	17000
		27000
Less:- non cash & non-operating incomes		
Profit on sale of land	5000	
Income tax refund	3000	8000
Cash flow from operating activities.		19000

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COMPASS

Date :

5. Calculate cash from operations from the following
Profit made during the year Rs. 250000 after considering the following items
a. Depreciation on fixed assets - Rs. 10000
b. Amountization of Goodwill - Rs. 5000
c. Transfer to general reserve - Rs. 9000
d. Profit on sale of land Rs. 3000

(ii) The following the position of current asset and current liabilities

Particulars	2020	2021
Debtors	12000	15000
Creditors	15000	10000

⇒ Calculation of Cash flow from operating activities

Particular	₹	Amount
Profit for the year		250000
Add: non cash & non-operating exp.		
Depreciation on Fixed asset	10000	
Amountization of Goodwill	5000	
Transfer of general reserve	9000	24000
		274000
Less: non cash & non-operating incomes		
Profit on sale of land	3000	3000
		271000
Add: ↑CL ↓CA	-	
Less: ↑CA ↓CL		
Debtors (12000 - 15000)	3000	
Creditors (15000 - 10000)	5000	8000
Cash flow from operating activities		263000

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Date :

6. The balance sheet of VXL ltd as on 31st december of 2 years are given below.

Assets	2021	2022
Cash balance	50000	60000
Trade debtors	75000	100000
Inventory	140000	120000
Land	100000	80000
Plant & machinery	200000	250000
Total	565000	610000
Liabilities		
Trade creditors	30000	40000
Debentures	150000	90000
Provision for depreciation on plant	60000	80000
Equity share capital	200000	240000
Retained earnings	125000	160000
Total	565000	610000

Cash dividends of Rs. 25000 have been paid during the year. Prepare a cash flow statement on indirect basis.

⇒ Note : profit for the year

Profit = Cash dividend + Increased retailed earnings (125000 - 160)

= 25000 + 35000

= 60000

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Date :

Cash Flow Statement

Particulars	₹	Amount
I. Operating Activities		
Profit for the year		60000
Add: non-cash & non-operating expenses		
Provision of depreciation on plant and machinery [60000 - 80000]	20000	
Add: ↑CL ↓CA		
Creditors (30000 - 40000)	10000	
Inventory (140000 - 120000)	20000	50000
		110000
Less: ↑CA ↓CL		
Debtors [75000 - 100000]	25000	25000
		85000
II. Investing Activities		
Sale of land	20000	
Purchase of plant & machinery	(-) 50000	(-) 30000
		55000
III. Financing Activities		
Debentures (150000 - 90000)	(+) 60000	
Share capital (200000 - 240000)	40000	
Cash dividend	(-) 25000	(-) 45000
Total cash flow Activities		10000

Opening cash bal - closing cash bal = cash flow activities

50000 - 60000 = 10000

Land a/c

Dr | Cr

Particulars	Amt	Particulars	Amt
To balance b/d	100000	By sale of land	20000
		By balance c/d	80000
Total	100000	Total	100000

Plant & machinery a/c

Dr | Cr

Particulars	Amount	Particulars	Amt
To balance b/d	200000		
To purchase of plant & machine	40000	By balance c/d	240000
Total	240000	Total	240000

2. Given below are the balance sheet of IBRL & sons.

Liabilities	1-1-22	31-12-22	Assets	1-1-22	31-12-22
Creditors CL OA	40000	42000	Cash	10000	7000
Mrs. Ashlons loans FA	25000	-	Debtors OA CA less	30000	50000
loans from bank FA	40000	50000	Stock OA CA add	35000	25000
Capital FA	125000	153000	Machinery IA	80000	55000
			Land IA	40000	50000
			Building IA	35000	60000
Total	230000	247000	Total	230000	247000

During the year a machine costing Rs. 10000 [Accumulated depreciation Rs - 3000] Sold for Rs. 5000

The provisions for depreciation against machinery as on 1-1-2022 was Rs. 25000 and on dec - 2022 - 31st Rs. 40000

Net profit for the years Amounted Rs. 45000. Drawings of Rs. 17000.

Prepare cash flow Statement.

Cash Flow Statement

	Particulars	₹	Amt
I	Operating Activities		
	Profit for the year		45000
	Add: non-cash and non-operating expenses.		
	loss on sale of machinery	2000	
	Provision for depreciation on machinery	18000	
	Add: ↑CL ↓CA		
	Creditors [40000 - 44000]	4000	
	Stock [35000 - 25000]	10000	34000
			79000
	Less: ↑CA ↓CL		
	Debtors [30000 - 50000]	20000	20000
	Cash flow from operating activities		59000
II.	Investing Activities		
	Sale of machinery	5000	
	Purchase of land	⊖10000	
	Purchase of building	⊖25000	⊖30000
	Cash flow from investing activities		⊖29000
III.	financing activities		
	Mrs. A's loan	⊕25000	
	loan from bank [40000 - 50000]	10000	
	Drawings	⊖17000	⊖32000
	Total cash flow activities.		⊖3000

Opening balance of cash - 10000
Closing balance of cash - 7000.

Machinery a/c

Dr | Cr

Particulars	Amt	Particulars	Amt
To balance b/d [80000 + 25000]	105000	By depreciation a/c	3000
		By sale of machinery	5000
		By loss on sale of machinery (5000+4000)	2000
		By balance c/d	95000
Total	105000	Total	105000

10000 - cost
3000 - dep
7000
5000 - SP
2000

Provision for depreciation on machinery a/c

Dr | Cr

Particulars	Amt	Particulars	Amt
To machinery a/c	3000	By balance b/d	25000
To balance c/d	40000	By adjusted P&L a/c [B/F]	18000
Total	43000		43000

Land a/c

Dr | Cr

Particulars	Amt	Particulars	Amt
To balance b/d	40000	By balance c/d	50000
To purchase of land [B/F]	10000		
Total	50000	Total	50000

Building a/c

Dr | Cr

Particulars	Amt	Particulars	Amt
To balance b/d	35000		
To purchase of building [B/F]	25000	By balance c/d	60000
	60000	Total	60000

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Date :

3. Following is the balance sheet of AB com. ltd as on 1-1-22 and 31-12-22.

	Liabilities	1-1-22	31-12-22
FA	Equity share capital	300000	350000
FA	Share premium	–	30000
OA	General reserve	45000	65000
OA	Profit and loss a/c	30000	80800
FA	6% debentures	–	70000
CL	Sundry creditors	85000	90700
OA CL	Provision for taxision	22500	40500
	Proposed dividend	30000 FA	35000 OA
	Total	512500	762000
	Assets	1-1-22	31-12-22
IA	Land & building	230000	3890000
IA	Plant & machinery	85400	1140000
IA	Furniture	5500	6500
CA	Stock	82400	95700
CA	Sundry debtors	75000	85500
CA	Bank balance	34200	44300
	Total	512500	762000

Additional information: &

depreciation written off during the year:

Land & building Rs. 60000

Plant & machinery Rs. 50000

Furniture Rs. 1200

Tax paid ₹22500

Prepare a Cash flow statement.

Cash flow statement

Particulars	₹	Amount
I. Operating Activities		
Profit for the year [30000 - 80800]		50800
Add: non-cash & non operating expenses		
General reserve [45000 - 65000]	20000	
Proposed dividend	35000	
Depreciation on assets		
Land & building	60000	
Plant & machinery	50000	
Furniture	1200	
Provision for tax	40500	206700
		257500
Add: ↑CL ↓CA		
Creditors [85000 - 90700]	5700	5700
		263200
Less: ↑CA ↓CL		
Debtors [75000 - 85500]	10500	
Stock [82400 - 95700]	13300	23800
Less: Income Tax paid		22500 (239400)
Total operating activities		216900
II. Investing activities		
Purchase of land & building	220000	
Purchase of plant & machinery	104600	
Purchase of furniture	2200	(-)326800
Total investing activities		(-)109900
III. Financing activities		
Equity share [300000 - 350000]	50000	
6% debenture	70000	
Share premium	30000	
Proposed dividend	(-)30000	120000
Net cash flow		10100

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Date :

Land & Building a/c

Dr. Cr.

Particulars	Amount	Particulars	Amt
To balance b/d	230000	By depreciation a/c	60000
To purchase [B/F]	220000	By balance c/d	390000
Total	450000	Total	450000

Plant & Machinery a/c

Dr. Cr.

Particulars	Amt	Particulars	Amt
To balance b/d	85400	By depreciation a/c	50000
To purchase [B/F]	104600	By balance c/d	140000
Total	190000	Total	190000

Furniture a/c

Dr. Cr.

Particulars	Amt	Particulars	Amt
To balance b/d	5500	By depreciation a/c	1200
To purchase [B/F]	2200	By balance c/d	6500
Total	7700	Total	7700

Income tax a/c | Provision for taxision a/c

Dr. Cr.

Particulars	Amt	Particulars	Amt
To balance c/d	40500	By balance b/d	22500
To tax paid	22500	By P&L a/c [B/F]	40500
Total	63000	Total	63000

Opening balance of cash = 34200

Closing balance of cash = 44300

4. The balance sheet are given

Liabilities	2021	2022	Assets	2021	2022
Equity share capital	300000	400000	Goodwill	1150000	90000
Preference share capital	150000	100000	Land & building	200000	170000
General reserve	40000	70000	Plant	80000	200000
Profit & loss a/c	30000	48000	Debtors	160000	200000
Proposed dividend	42000	50000	Stock	77000	109000
Creditors	55000	83000	Bills receivable	20000	30000
Bills payable	20000	16000	Cash in hand	15000	10000
Provision for taxation	40000	50000	Cash at bank	10000	8000
Total	677000	817000	Total	677000	817000

It is also given that

(i) Depreciation of ₹20000 on land & building & ₹10000 on plant has been charged in 2022

(ii) Interim dividend of ₹20000 has been paid in 2022

(iii) Income tax ₹35000 has been paid during 2022

Prepare cash flow statement for the year 2022

⇒ Dr

Land and building a/c

Particulars	Amt	Particulars	Amt
To balance b/d	200000	By Depreciation a/c	20000
		By sale of land & building [B/F]	10000
		By balance c/d	170000
Total	200000	Total	200000

Dr

Plant a/c

Particulars	Amt	Particulars	Amt
To balance b/d	80000	By depreciation a/c	10000
To purchase [B/F]	130000	By balance c/d	200000
Total	210000	Total	210000

M T W T F S S

Date:

Dr

Income tax

Cr

Particulars	Amt	Particulars	Amt
To bank a/c [Income tax paid]	35000	By balance b/d	40000
To balance c/d	50000	By P&L a/c [B/F]	45000
	85000		85000

Cash flow statement for the year 2022

Particulars	₹	Amount
I. Operating Activities		
Profit for the year [30000 - 48000]		18000
Add: non-cash and non-operating expenses		
General reserve [40000 - 70000]	30000	
Goodwill [150000 - 90000]	25000	
Proposed dividend	80000	
Provision for taxation	45000	
Depreciation on land & building	20000	
Depreciation on plant	10000	
Interim dividend	20000	200000
		218000
Add: PCL | CA		
Creditors [55000 - 83000]	28000	28000
		246000
Less: PCA | CL		
Debtors [160000 - 200000]	40000	
Bills receivable [20000 - 30000]	10000	
Stock [77000 - 109000]	32000	
Bills payable [20000 - 16000]	4000	86000
		160000
Less: Income tax paid	35000	35000
Total operating activities		125000

II. Investing activities		
Sale of land & building	10000	
purchase of plant	₹130000	₹120000
		5000
III. Financing activities		
Equity share capital [300000-400000]	100000	
Preference share capital [150000-100000]	₹50000	
Proposed dividend	₹42000	
Interim dividend	₹20000	₹12000
Total Net flow of cash		₹7000
Opening balance of cash [15000+10000]		25000
Closing balance of cash (10000+8000)		18000

5. From the following balance sheet of the PK. Ltd for the years ending 31-12-2021 and 31-12-2022. Prepare cash flow statement.

Liabilities	2021	2022
Equity share capital	215000	275000
Reserves	40000	40000
Profit & loss a/c	39690	41220
Provision for taxation	40000	50000
Bank loan	59510	-
Current liability	73280	52660
Total	467480	458880
Assets	**2021**	**2022**
Goodwill	-	20000
Plant & machinery	112950	116200
Land & building	148500	144250
Current assets	198530	170730
Cash	7500	7700
Total	467480	458880

The following information is also provided

1. A dividend of £26000 was paid during the year 2022
2. Profit before tax for the year was £62530
3. During the year 2022, the company paid tax £25000
4. During the year, the company purchased another company and paid £60000 in share capital. it acquired stock £21640 and plant £18360
5. It purchases machinery costing £5650 during the year.

⇒ Plant & machinery a/c.

Dr (Cr)

Particulars	Amt	Particulars	Amt
To balance b/d	112950	By depreciation [B/F] P&L a/c	20760
To cash a/c [purchase]	5650		
To [purchase [Non cash]	18360	By balance c/d	116200
Total	136960	Total	136960

Dr Land & building a/c (Cr)

Particulars	Amount	Particulars	Amount
To balance b/d	148500	By depreciation [B/F]	4250
		By balance c/d	144250
Total.	148500	Total	148500

Equity share capital [215000 - 275000] i.e 60000, which was gained by purchase of company [60000] [in adjustment so, we should not take it, ignore it or reject it.

Cash flow statement of P.K ltd.

Particulars	₹	Amount
I. Operating activities		
Profit for the year		62530
Add: non-cash & non-operating exp.		
Goodwill [only closing bal should not be taken as it is operating exp.]	-	
Reserves [40000 - 40000]	-	
Depreciation on:		
land & building	4250	
Plant & machinery	20760	
Stock of materials [adjustment]	21640	
Add: TCL ↓ CA		
Current assets [198530 - 170730]	27800	
Less: TCA ↓ CL		
Current liabilities [73280 - 52660]	⊖ 20620	53830
		116360
Less: Tax paid		25000
Total operating expenses		
II. Investing activities		
Purchase of plant & machinery	⊖ 5650	⊖ 5650
		85710
III. financing activities		
Bank loan	₹ 59510	
Dividend	⊖ 26000	⊖ 85510
Net cash flow		200
Opening balance of cash		7500
Closing balance of cash		7700

6. Given below are the balance sheet of Glow ltd as on 31st march 2021 and 31st march 2022.

		2021	2022
	Liabilities		
FA	Equity share capital	200000	300000
	Long term loan	100000	100000
all CL	Creditors	150000	200000
all	Bills payable	200000	300000
X	Retained earnings	180000	200000
	Total	830000	1100000
	Assets	2021	2022
	Cash	60000	30000
Less	Stock	120000	190000
Less	debtors	80000	120000
OA	Goodwill	200000	150000
IA	plant & machinery	100000	200000
IA	Land & building	200000	400000
IA	furniture	70000	10000
	Total	830000	1100000

Additional information :

a. Operating expenses include depreciation ₹80000 and amortization of goodwill ₹50000

b. A machine has been sold for 15000. The writtendown value of the machine was 40000 and 20000 depreciation is changed on the same in 2022

c. Plant & machinery was purchased for cash ₹140000 and land & buildings for ₹260000

d. Furniture was sold for cash ₹60000

e. Equity shares were issued for cash ₹100000

f. 80000 dividend was paid in cash

g. Net profit for the year ending 31-3-22 was ₹100000.

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COMPASS

Date :

Plant & Machinery a/c

Particulars	Amount	Particulars	Amt
To balance b/d	100000	By sale of machinery	15000
To purchase	140000	By depreciation on machinery	20000
		By loss on sale of machinery	5000
		By balance b/d	200000
Total	240000	Total	240000

Land & building a/c

Particulars	Amt	Particulars	Amt
To balance b/d	200000	By depreciation [B/F]	60000
To purchase	260000	By balance c/d	400000
	460000		460000

Furniture a/c

Particulars	Amt	Particulars	Amt
To balance b/d	70000	By cash a/c [purchase]	60000
		By balance c/d	10000
Total	70000		70000.

Cash flow statement of Glow ltd.

Particulars	₹	Amount
I. Operating activities		
Profit for the year		100000
Add: non cash & non-operating expenses		
Goodwill [200000 - 150000]	50000	
Depreciation on:		
Plant & machinery	20000	
Land & building	60000	
Loss on sale of plant & machinery	5000	135000
		235000
Add: ↑CL ↓CA		
Creditors [150000 - 200000]	50000	
Bills payable [400000 - 300000]	100000	150000
		385000
Less: ↑CA ↓CL		
Stock [120000 - 190000]	70000	
Debtors [80000 - 120000]	40000	110000
Total operating activities		275000
II. Investing activities		
Plant & machinery purchase	(-) 140000	
Land & building purchase	(-) 260000	
Sale of furniture	60000	
Sale of machine	15000	(-) 325000
Total investing activities		(-) 50000
III. Financing activities		
Equity share capital [200000 - 300000]	100000	
Dividend	(-) 80000	20000
Net cash flow		(-) 30000
Opening balance of cash		60000
Closing balance of cash.		30000

7. From the following condensed comparative balance sheet of Bangalore mills ltd and additional information, prepare a cash flow statement for the year 2022

Liabilities	2021	2022	Assets	2021	2022
Share capital	70000	80000	Plant & machinery	62000	66000
Share premium	9000	11000	Accumulation dep.		
Retained earnings	23820	30820	on p & m	37000	26200
7% mortgage loan	-	20000	Building	95000	116000
Creditors	6900	6000	Accumulation dep	43000	45000
O/s salaries	2000	1400	on building		
Provision for taxation	1000	1400	Land	10000	12000
			Stock	10220	9620
			Debtors	8600	7600
			Prepaid expenses	720	800
			Cash	6180	9800
Total	112720	150620		112720	150620

Additional information

1. Plant costing £16000 [accumulated depreciation £14800] was sold during the year for £1200
2. Building was acquired during the year at a cost of £21000. In addition to cash payment of £1000, a 7% mortgage loan was raised for the balance.
3. Dividend of £8000 was paid during the year
4. A sum of £13900 was transferred to provision for taxation a/c in 2022

⇒ Profit = retained earnings + dividend + provision for taxation
= 7000 + 8000 + 13900
= 28900,,

Dr Retained Earnings. Cr

Particulars	Amt	Particulars	Amt
		By balance b/d	23820
To balance c/d	30820	By p & l a/c [B/F]	7000
	30820.	Total	30820

Dr Provision for taxation Cr

Particulars	Amt	Particulars	Amt
To cash a/c [income tax]	13500	By balance b/d	1000
To balance c/d	1400	By P & l a/c	13900
	14900		14900.

Dr. Accumulated depreciation on plant & machinery a/c Cr

Particulars	Amt	Particulars	Amt
To plant a/c	14800	By balance b/d	37000
To balance c/d	26200	By P & l a/c [B/F]	4000
Total.	41000	Total	41000

Dr Plant & machinery a/c. Cr

Particulars	Amt	Particulars	Amt
To balance b/d	62000	By depreciation a/c	14800
To purchase [B/F].	20000	By sale of plant	1200
		By balance c/d	66000
Total	82000	Total.	82000

Dr

Building a/c

Particulars	Amt	Particulars	Amt
To balance b/d	95000		
To Cash a/c [purchase]	1000		
To 7% mortage loan	20000	By balance c/d	116000
Total	116000	Total	116000

Dr

Accumulated depreciation on building a/c

Particulars	Amt	Particulars	Amt
		By balance b/d	43000
		By p & l a/c [BIF]	2000
To balance c/d	45000		
Total	45000	Total	45000

Cash flow statement for the year 2022

Particulars	£	Amt
Profit for the year		28900
I. Operating activities:		
Add: non cash & non-operating expenses.		
Accumulated depreciation on p & m	4000	
Accumulated depreciation on building	2000	
Add: ↑CL ↓CA		
Stock [10220 - 9620]	600	
Debtors [8600 - 7600]	1100	7600
		36500
Less: ↑CA ↓CL		
Prepaid expenses [720 - 800]	80	
Creditors [6900 - 6000]	900	
o/s salaries [2000 - 1400]	600	1580
		34920

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Date:

Less: Tax paid	13500	
Total operating activities		21420
II. Investing activities		
Purchase of plant & machinery	(-) 20000	
Sale of plant	1200	
Purchase of building	(-) 1000	
Purchase of land [100000 - 120000]	(-) 2000	(-) 21800
		(-) 380
III. Financing Activities		
Share capital [70000 - 80000]	10000	
Share premium [9000 - 11000]	2000	
Dividend	(-) 8000	4000
Net cash inflow		3620
Opening balance of cash		6180
Closing balance of cash.		9800

8. Calculate cash from the following operations.

Particulars	2021	2022
Profit & loss appropriation a/c	20000	30000
Bills receivable	14000	18000
Provision for depreciation	30000	32000
o/s rent payable	1600	4000
Prepaid insurance	1400	1200
Goodwill	20000	16000
Stock	14000	18000

Cash flow.

Cash from operating activities.

Particulars	£	Amt
Profit for the year		10000
Add: non-cash & non-operating expenses		
Provision for depreciation [3000 - 5000]	2000	
Goodwill [20000 - 16000]	4000	6000
Add: ↑CL ↓CA		
o/s rent [1600 - 4000]	2400	
Prepaid insurance [1400 - 1200]	200	2600
		18600
Less: ↑CA ↓CL		
Bills receivable [14000 - 18000]	4000	
Stock [14000 - 18000]	4000	8000
Total operating activities		10600

9. Calculate cash flow operations from the following profit and loss a/c from the year ending 31-3-2021

Particulars	Amt	Particulars	Amt
To wages	25000	By Gross profit	112500
To salaries	37500	By profit on sale of land	10000
To depreciation	2500	By income tax refund	10000
To loss on sale of plant	5000		
To goodwill written off	10000		
Proposed divided	12500		
Provision for tax	12500		
To net profit	27500		
	132500		132500

Particulars	₹	Amt.
Profit for the year		27500
Add: non-cash & non-operating exp		
Depreciation	2500	
Loss on sale of plant	5000	
Goodwill written off	10000	
Proposed dividend	12500	
Provision for tax	12500	42500
		70000
Less: profit on sale of land	10000	10000
Total cash flow from operating activities		60000

BUDGETORY CONTROL

Budget

Budget refers to a plan relating to a definte future period of time expressed in monetory or quantitative terms

OR

Budget is a pre-determined detailed plan of action, developed and distributed as a guide to current operations and as a partial bases for subsequent evaluation of performa

Budgetting

The act of preparing budgets is called budgetting. OR The entire process of preparing the budgets is known as budgetting

Budgetory Control

It is a system of controlling cost through preperation of budgets, It is the establishment of budgets relating to the responsibilities of executives of a policy and the continous comparision of the actual with the budgetted results, either to secure by individual action the objective of the policy or to provide a basis for its revision.

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Date :

- Objectives of budgetary control

a. Planning
b. Coordination
c. Communication
d. Motivation
e. Control
f. Performance evaluation

- Types of functional budgets

a. Sales budget
b. Production budget
c Production cost budget
d Raw materials budget
e. Purchases budget
F. labour budget
g. Production overhead budget
h. Selling & distribution cost budget
i Administration cost budget
j Cash budget
K. Capital expenditure budget.

- Master budget

Master budget is a summary budget in corporate its component functional budget which is finally approved, adopted and employed
It has 2 parts like operating budget & financial budget.

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Date :

- **Fixed Budget**

Which is designed to remain unchanged irrespective of the level of activity attained.

- **Flexible Budget**

Which is designed to change in relation to the level of activity attained.

vi **Problems on Flexible budget**

1. Draw a flexible ~~budget~~ budget for a overhead expenses on the basis of the following data & determine the overhead rates @ 70%, 80% & 90% plant capacity.

Particulars	@ 80%
Variable overhead:	
Indirect labour	12000
Stores including spare	4000
Semi variable OH:	
Power [30% fixed, 70% variable]	20000
Repairs & maintenance [60% fixed, 40% variable]	2000
Fixed overhead:	
depreciation	11000
Insurance	3000
Salaries	10000
Total overheads	62000
Estimated direct labour hours	124000 hours.

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Flexible budget

Particulars	70% capacity (×70/80)	80% cap.	90% cap. (×90/80)
Variable overhead			
Indirect labour	10500	12000	13500
Stores including spares	3500	4000	4500
Semi-variable overhead			
Power [fixed 30%]	6000	6000	6000
[variable 70%]	12250	14000	15750
Repairs & maintainence [fixed 60%]	1200	1200	1200
[variable 40%]	700	800	900
fixed overhead			
Depreciation	11000	11000	11000
Insurance	3000	3000	3000
Salaries	10000	10000	10000
Total overhead	58150	62000	65850
Estimated direct labour hours (124000 × 70/80)	108500	124000	139500 (124000 × 90/80)
	0.53	0.5	0.47

2. Prepare a flexible budget for the overhead of diamond ltd fo the following data & ascertain the overhead rates based on dire labour hours @ 50%, 60% & 70% capacity.

Particulars	@ 60% capacity
Variable overhead :	
Indirect material	6000
Indirect labour	18000
Semi-variable overhead :	
Electricity [40% fixed, 60% variable]	30000
Repairs [80% fixed, 20% variable]	3000
Fixed overheads :	
depreciation	16500

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Insurance	4500
Salaries	15000
Total overhead	93000
Estimated direct labour hrs	186000 hrs.

⇒ Flexible budget for diamond ltd.

Particulars	50% cap.	60% cap.	70% cap.
Variable overhead :			
Indirect material	5000	6000	7000
Indirect labour	15000	18000	21000
Semi variable overhead			
Electricity [fixed 40%]	12000	12000	12000
[variable 60%]	15000	18000	21000
Repairs [fixed 80%]	2400	2400	2400
[variable 20%]	500	600	700
fixed overhead			
depreciation	16500	16500	16500
Insurance	4500	4500	4500
Salaries	15000	15000	15000
Total overhead	85900	93000	100100
Estimated direct labour hours	155000	186000	217000
	0.55	0.5	0.46

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Flexible budget In Units Date:

3. For a production of 10000 electrical irons the following are budgeted expenses.

Particulars	Amt P/u
Direct material	60
Direct labour	30
Variable overhead	25
fixed overhead [₹150000]	15
Variable expenses [direct]	5
Selling expenses [10% Fixed]	15
Administration expenses [₹50000 rigged of all levels of production]	5
Distribution expenses [20% Fixed]	5
Total cost of sales per unit	160

Prepare a budget for the production of 6000, 7000, 8000 irons showing ~~distinct~~ distinct margin cost and total cost.

Flexible Budget

Particulars	10000 units		6000 units		7000 units		8000 units	
	Units	Amt	Units	Amt	Units	Amt	Units	Amt
Direct material	60	600000	60	360000	60	420000	60	480000
Direct labour	30	300000	30	180000	30	210000	30	240000
Variable OH	25	250000	25	150000	25	175000	25	200000
Fixed OH	15	150000	25	150000	21.43	150000	18.75	150000
Variable OH	5	50000	5	30000	5	35000	5	40000
Selling expenses								
Fixed 10%	1.5	15000	2.5	15000	2.14	15000	1.88	15000
Variable 90%	13.5	135000	13.5	81000	13.5	94500	13.5	108000
Admin. expenses	5	50000	8.33	50000	7.14	50000	6.25	50000
Distri. expenses								
Fixed 20%	1	10000	1.67	10000	1.429	10000	1.25	10000
Variable 80%	4	40000	4	24000	4	28000	4	32000
Total	160	1600000	175	1050000	169.65	1187550	165.63	1325040

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Date :

Problems on budgetary control in units

1. The expenses budgeted for production of 10000 units in a factory are furnished below

Particulars	Amt p/u	
Materials	₹70	
labour	25	
Variable overhead	20	
Fixed overhead [₹100000]	10	
Variable expenses [direct]	5	10% - 13x10% =
Selling expenses [10% fixed]	13	90% - 13x90% =
Distribution expenses [20% fixed]	7	20% - F 80% - V
Administration expenses [₹50000]	5	
Total	155	

Prepare a budget for the production of 8000 units & 6000 units. Assume that administration expenses are rigied for all levels of production.

Flexible budget.

Particulars	10000 units		6000 units		8000 units	
	Units	Amount	Units	Amount	Units	Amount
Material	70	700000	70	420000	70	560000
labour	25	250000	25	150000	25	200000
Variable overhead	20	200000	20	120000	20	160000
Fixed overhead	10	100000	16.67	100000	12.5	100000
Variable expenses	5	50000	5	30000	5	40000
Selling expenses:						
Fixed [10%]	1.3	13000	2.17	13000	1.625	13000
Variable [90%]	11.7	117000	11.7	70200	11.7	93600
Distribution expenses:						
fixed [20%]	1.4	14000	2.33	14000	1.75	14000
Variable [80%]	5.6	56000	5.6	33600	5.6	44800
Administration exp	5	50000	8.33	50000	6.25	50000
Total	155	1550000	166.8	1000800	159.42	1275400

2. The cost at a capacity level at 5000 units is given below. for a variable of 20% in capacity above or below this level. The individual expenses as indicated

Particulars	Rs.	Rs.
Material cost.	250000	
100% varying		
labour cost	150000	
Power	1250 [80% v]	
Repairs & maintaine	2000 [75% v].	
Stores	1000 [100% v]	
Inspection	500 [20% v].	
Depreciation	10000 [100% f]	
Administration OH	5000 [25% v]	

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Selling OH - 3000 [50% V].

Total - 62750

Cost per unit - 12.55

Find the unit cost of the product at production level of 4000 units and 6000 units.

⇒ Flexible budget.

Particulars	5000 units		4000 units		6000 units	
	Units	Amt	Units	Amt	Units	Amt
Material cost.	5	25000	5	20000	3	30000
labour	3	15000	3	12000	3	18000
Power : Fixed 20%.	0.05	250	0.0625	250	0.0416	250
Variable 80%.	0.2	1000	0.2	800	0.2	1200
Repairs and maintaince						
fixed 25%.	0.1	500	0.125	500	0.083	500
Variable 75%.	0.3	1500	0.3	1200	0.3	1800
Stores	0.2	1000	0.2	800	0.2	1200
Inspection : fixed 80%.	0.08	400	0.1	400	0.6	400
Variable 20%.	0.02	100	0.02	80	0.02	120
Depreciation	2	10000	2.5	10000	1.67	10000
Administration overhead						
Fixed - 75%.	0.75	3750	0.93	3750	0.625	3750
Variable 25%.	0.25	1250	0.25	1000	0.25	1500
Selling overhead						
fixed 50%.	0.3	1500	0.375	1500	0.25	1500
Variable 50%.	0.3	1500	0.3	1200	0.3	1800
Total.	12.55	62750	13.3625	53480	11.99	72020

Cash Budget.

Date :

3. A company is expecting to have Rs 16000 cash in hand on 1st April 2021 and it request to prepare cash budget for the three months. April / June
The following information is supplied to you

Months	Sales	Purchase	Wages	Expenses
Feb	35000	22000	3000	2500
March	40000	28000	4500	3000
April	48000	30000	4500	3500
May	50000	34000	5500	4500
June	60000	31000	7000	4500.

Other information:

a. Period of credit allowed by suppliers is 2 months
b. 25% of sales is for cash and the period of credit allowed to customers for credit sales is 1 month. (Receipts)
c. Delay in payment of wages and expenses 1 month (Payment)
d. Income tax Rs. 14000 is to be paid in June 2021 (")

⇒ Cash budget for the months of April to June 2021

Particulars	April	May	June
Opening balance of cash	16000	34500	48500
Add: Receipts			
Cash sales @ 25%	12000	12500	15000
Collection from debtors	30000	36000	37500
Total receipts (A)	58000	77000	93500
Less: Payments			
Creditors	22000	28000	30000
Wages	4500	4500	5500
Expenses	3000	3500	4500

Income tax	–	–	14000
(B)	29500	36000	54000
(A-B) Closing balance of cash	28500	41000	39500

April : Cash sales - 48000 x 25% = 12000
Collection from debtors - 40000 x 25% - 10000 = 30000
May : Cash sales - 50000 x 25% = 12500
Collection from debtors = 48000 x 25% - 12000 = 36000
June : Cash sales - 60000 x 25% = 15000
: Collection from debtors = 50000 x 25% - 12500 = 37500

4. A newly formed company decides to prepare a cash budget for 4 months from march to june 2021.

Months	Sales	Purchase	Wages	Overhead
January	20000	20000	4000	4000
Febuary	22000	14000	4400	4200
March	28000	14000	4600	4300
April	36000	22000	4600	4500
May	30000	20000	4000	4100
June	40000	25000	5000	4800

Additional information :
a. Cash balance on 1st march 2021 10000
b. New machinery is to be installed at a cost Rs. 20000 in the month of febuary which is to be paid in two equal installments in march and april. (Payment)
c. Rs. 12000 is to be collected in march as 2nd call money.
d. Period of credit allowed by creditors is two months and allowed to customers 1 month.
e. 50% of sales and purchases are for cash.

F. delay in payment of wages 1/2 month lag in one month and overheads are paid in the same month.

Cash budget of newly formed Co.
for the month of march to june 2021.

Particulars	March	April	May	June
Opening balance of cash	10000	4200	(-) 7900	(-) 5300
Add: Receipt				
2nd call money	12000	-	-	-
Debtors [22000 x 50%]	11000	14000	18000	15000
[A]	33000	18200	10100	9700
Less: payment				
Purchase a new machine	10000	10000	-	-
Creditors [20000 x 50%]	10000	7000	7000	11000
Wages	4500	4600	4300	4500
Overhead	4300	4500	4100	4800
[B]	28800	26100	15400	20300
Closing balance of cash	4200	(-) 7900	(-) 5300	(-) 10600

Calculation of wages

March = 1/2 of feb + 1/2 of march
= 2200 + 2300 = 4500

April = 1/2 of march + 1/2 of april
= 2300 + 2300 = 4600

May = 1/2 of april + 1/2 of may
2300 + 2000 = 4300

June = 1/2 of may + 1/2 of jun
= 2000 + 2500 = 4500

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Date :

1. Acharya company wishes to facilitate overdraft facility with his bankers during the period april to june 2021. Prepare a cash budget.

2021	Sales	Purchase	Wages
Feb	180000	124800	12000
March	192000	144000	14000
April	108000	243000	11000
May	174000	246000	10000
June	186000	268000	15000

Additional information.

(i) 50% of credit sales are realised in the 1st month following sales and the remaining 50% in the 2nd month following.

(ii) Creditors are paid in the month following the month of purchase

(iii) Wages paid in the same month

(iv) Estimated cash at bank on 1/4/2021 - 50000.

⇒ Debtors = 50% of sales in 1st mnt 50% Sales in the 2nd month

April : 192000 x 50% = 96000 + 90000 [180000 x 50/100] = 186000

May = [108000 x 50%] 54000 + 96000 [192000 x 50%] = 150000

June = [174000 x 50%] 87000 + 54000 [108000 x 50%] 141000

Credit purchase : April : 144000

May : 243000

June : 246000

Cash budget of Acharya Co
for the month of April to June 2021

Particulars	April	May	June
Opening balance of cash	50000	81000	(-) 22000
(+) Receipts			
Debtors	186000	150000	141000
[A]	236000	231000	119000
(-) Payments			
Creditors	144000	243000	246000
Wages	11000	10000	15000
[B]	155000	253000	261000
Closing balance of cash	81000	(-) 22000	(-) 142000

2. Adhithya limited events to prepare a cash budget of the Company for 3 months from april to june, 2021

Months	Sales	Purchase	Wages	Selling exp	Overheads
Jan	160000	85000	32000	80000	10000
Feb	185000	92000	37000	95000	11500
March	210000	100000	42000	10500	13000
April	245000	120000	49000	12500	14500
May	178000	90000	35000	8900	10500
June	182000	98000	36000	9000	11000.

Additional information.

(1) Credit allowed to debtors 2 months.
(2) Period allowed by creditors 1 month
(3) lag in payment of wages, selling expenses and overhead 1 month
(4) Expected cash sales ₹ 15000 per month.

⑤ Expenditure on machinery is payable in april ₹50000

⑥ Expected cash balance in april ₹10500.

7) Cash budget of Adithya ltd for the month of April to june 2021.

Particulars	April	May	June.
Opening balance of cash	10500	25000	24000
Add: Receipts			
Debtors [sales]	185000	210000	245000.
Cash sales	15000	15000	15000
[A]	210500	220000	284000
Less: payment			
Creditors [purchase]	100000	120000	90000
Expenditure on machinery	50000	-	-
Wages	42000	49000	35000
Selling expenses	10500	12500	8900
Overhead	13500	14500	10500
[B]	215500	196000	144400
Closing balance of cash.	25000	24000	139000

From the following income & expenditure prepare a cash budget for the month of jan to april 2020.

Year	Month	Sales	Purchase	Wages	Manufact	Admin	Selling
1999	Nov	30000	15000	3000	1658	1060	500
2000	Dec	35000	20000	3200	1225	1040	550
2001	Jan	25000	15000	2500	990	1100	600
2002	Feb	30000	20000	3000	1050	1050	620
2003.	March	35000	22500	2400	1100	1220	570
2	April	40000	25000	2600	1200	1180	710

(1) The customers are allowed a credit for a period of two month
(2) Adividend of Rs. 10000 is payable in april
(3) Plant purchased on 15th jan for Rs. 5000, a building has been purchased on 1st march and payments are to be made in monthly installement of Rs. 2000 each.
(4) The creditors are allowing a credit of two months
(5) A wages are paid on the 1st of next month
(6) Lag in payment of other expenses is 1 month.
Balance of cash in hand on 1/1/2000 Rs 15000

Particulars	Jan	Feb	March	April
Opening balance	15000	18985	28795	30975
Debtors	30000	35000	25000	30000
Total receipts	45000	53985	53795	60975
Less: Payments				
Dividend	-	-	-	10000
Purchase of plant	5000	-	-	-
Purchase of building	-	-	2000	2000
Creditors	15000	20000	15000	20000
Wages	2900	2500	3000	2400
Manufacturing exp	1295	990	1050	1100
Admin exp	1040	1100	1150	1220
Selling exp	550	600	620	570
	26015	25190	22820	37290
Closing balance of cash	18985	28795	30975	23685

MARGINAL COSTING

Profit volume ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$ [in case of %].

Contribution = Sales - Variable cost

Contribution = Variable cost + fixed cost ± profit / loss.

Q1. Calculate profit volume ratio,
Sales - Rs. 500000
Variable cost - Rs. 200000 and fixed cost - 100000.

⇒ Contribution = Sales - Variable cost
= 500000 - 200000
= 300000

Profit volume ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$.

$= \frac{300000}{500000} \times 100 = 60\%$.

2. Calculate Profit volume ratio from the following
Sales - 10000 units of Rs. 10 each
Variable cost - Rs. 8 units each

⇒ Contribution = Sales - variable cost
= 100000 - 80000
= 20000.

Sales = 10000 x 10 = 100000
V.C = 10000 x 8 = 80000

Profit volume ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

$= \frac{20000}{100000} \times 100$

$= 20\%$ //

3. Calculate the amount of variable cost from the following.
Sales - Rs. 150000
Fixed cost - Rs. 30000.
Profit - Rs. 40000.

⇒ Sales - variable cost = fixed cost + profit
150000 - Variable cost = 30000 + 40000.
150000 - variable cost = 70000
Variable cost = 150000 - 70000
V.C = 80000 //

4. Calculate variable cost.
Sales - 220000
Fixed cost - 40000
loss - 15000

⇒ Sales - variable cost = fixed cost - loss
220000 - V.C = 40000 - 15000
220000 - V.C = 25000
V.C = 220000 - 25000
V.C = 195000 //

5. From the following information find out the amount of profit and ~~loss~~ during the year using marginal costing technique.
~~Sales~~ · Fixed cost - Rs. 250000
Variable cost - Rs. 10 per unit
Selling price - Rs. 15 per unit
Output level - 75000 unit

⇒ Sales = 75000 x 15 = 1125000

Variable cost = 75000 x 10 = 750000

Sales - variable cost = fixed cost + profit.

1125000 - 750000 = 250000 + Profit

375000 = 250000 + Profit

Profit = 375000 - 250000.

Profit = 125000

6. Determine the fixed cost

Output - Rs. 50000

V.C - Rs. 10

Selling price - Rs. 12

Profit = Rs. 45000.

⇒ Sales = 50000 x 12 = 600000

Variable cost = 50000 x 10 = 500000

Sales - variable cost = fixed cost + profit

600000 - 500000 = F.C + 45000

100000 = F.C + 45000

F.C = 100000 - 45000

F.C = 55000.

7. Find profit volume ratio, fixed cost, sales volume to earn a profit of Rs. 40000.

Sales - Rs. 100000

Profit - Rs. 10000

Variable cost - 70%.

⇒ (i) Profit volume ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

$= \frac{30000}{100000} \times 100$

$= 30\%$

Contribution = Sales − variable cost

$= 100000 - 70\%$

$= 30000$

(ii) Fixed cost

Sales − V.C = F.C + Profit

$100000 - 70000 = FC + 10000$

$30000 = FC + 10000$

$FC = 30000 - 10000$

$FC = 20000$

(iii) Sales volume to earn a profit of Rs. 40000

Sales − variable cost = F.C + Profit

$100000 - 70000 = 20000 + 40000$

$30000 = 60000$

$= 90000$

Sales	100000
(−) V.C	70000
Contri	30000
(+) F.C	20000
	50000
(+) Profit	40000
	90000

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Break even point.

[in units] BEP = $\frac{\text{Fixed Cost}}{\text{Contribution in units}}$

Contribution in units = Sales units - V.C in units

BEP = $\frac{\text{Fixed cost} \times \text{Sales}}{\text{Sales} - \text{variable cost}}$

① From the following information. Calculate the break even point in units and in sales value.
Output = 3000 units, selling price p.u Rs. 30, Variable cost - Rs. 20
Total fixed cost - Rs. 20000

⇒ Sales = $3000 \times 30 = 90000$

V.C = $3000 \times 20 = 60000$.

Contribution = Sales - variable cost
= 90000 - 60000
= 30000.

Contribution [In units] = 30 - 20
= 10 //.

(i) Break even point [in units] = $\frac{\text{Fixed cost}}{\text{Contribution in units}}$

= $\frac{20000}{10}$

= 2000.

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BEP = $\frac{\text{Fixed cost} \times \text{Sales}}{\text{Sales} - \text{V.C}}$

$= \frac{20000 \times 90000}{30000}$

$= 60000$ //.

2. Calculate BEP in units and sales for the following Fixed cost = Rs. 40000, output of the year - 10000 units, sales unit of Rs. 10, V.C - Rs. 12 p.u

⇒ Sales = $10000 \times 10 = 100000$.

V.C = $10000 \times 12 = 120000$.

Contribution = $100000 - 120000$

$= -20000$

Contribution [in units] = $10 - 12$

$= -12$.

(i) BEP [in unit] = $\frac{\text{Fixed cost}}{\text{Contribution in units}}$

$= \frac{40000}{2} = 20000$.

(ii) BEP [in sales] = $\frac{\text{fixed cost} \times \text{sales}}{\text{sales} - \text{variable cost}}$

$= \frac{40000 \times 100000}{-20000}$

$= -200000$ //.

3. From the following information, ascertain by how much the value of sales must be increased by the company to break even.
Sales - Rs. 300000
Fixed cost - Rs. 150000
Variable cost - Rs. 200000

⇒ BEP [in sales] = $\frac{\text{Fixed cost} \times \text{sales}}{\text{sales} - \text{variable cost}}$

$= \frac{150000 \times 300000}{300000 - 200000}$

$= \frac{150000 \times 300000}{100000}$

$= 450000$ //

4. Calculate BEP in sales and units
Sales - Rs. 400000
Fixed cost - Rs. 200000
V.C = Rs. 50000 and 15 units
Sales - units = Rs. 20

⇒ BEP [in units] = $\frac{\text{Fixed cost}}{\text{Contribution in units}}$

$= \frac{200000}{5}$

$= 40000$ Units.

Contribution in units = sales - V.C
$= 20 - 15$
$= 5$

Contribution in sales = sales - V.C
$= 400000 - 50000$
$= 350000$

BEP (in sales) = $\frac{\text{Fixed cost} \times \text{sales}}{\text{sales} - \text{V.C.}}$

$= \frac{200000 \times 400000}{350000.}$

$= 228571$ //.

Margin of Safety

It means the excess of actual or budgetted sales over the break even sales is called margin of safety. in other word, the difference between actual sales minus the sales at break even point.

The formula for margin of safety is

$$\text{m/s ratio} = \frac{\text{margin of safety}}{\text{sales}} \times 100$$

$$\text{MS} = \frac{\text{Actual sales} - \text{BEP sales}}{\text{Sales}} \times 100$$

OR

$$\text{MS} = \frac{\text{Profit}}{\text{PV ratio}} \times 100$$

Q1. From the following information calculate PV ratio, break even point margin of safety.

Total sales - Rs. 360000

Selling price - p.u. - 1000

Variable cost p.u - 50

Fixed cost - Rs. 100000

If the selling price is reduced to Rs. 90 by how much is the

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margin of safety reduced

7. Profit volume ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

$= \frac{180000}{360000} \times 100$

$= 50\%$

Contribution = Sales - V.C

$= 360000 - 180000$

$= 180000$

(ii) Break even point.

BEP [in units] $= \frac{\text{fixed cost}}{\text{Contribution in units}}$

$= \frac{100000}{50}$

$= 2000$

BEP [in sales] $= \frac{\text{fixed cost} \times \text{Sales}}{\text{C in Sales}}$

$= \frac{100000 \times 360000}{180000}$

$= 200000$

(iii) M of S / Margin of safty

$M_S = \frac{\text{Actual sales} - \text{BEP sales}}{\text{Sales}} \times 100$

$= \frac{360000 - 200000}{360000} \times 100$

$= 44.44\%$

(b) If selling price is reduced by Rs. 90 i.e. 90%.

$360000 \times 90\% = 324000$. = sales.

(i) P.V ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$.

$= \frac{144000}{324000} \times 100 = 44.44\%$.

Contribution = Sales − V.C

$= 324000 - 180000$

$= 144000$.

(in units) $= 90 - 50$

$= 40$.

(ii) BEP (in units) = $\frac{\text{Fixed cost}}{\text{Contribution in units}}$

$= \frac{100000}{40} = 2500$ units.

(iii) BEP (in sales) = $\frac{\text{Fixed cost} \times \text{Sales}}{\text{C in Sales}}$

$= \frac{100000 \times 324000}{144000} = 225000$.

M|S = $\frac{\text{AS} - \text{BEP in sales}}{\text{Sales}} \times 100$.

$= \frac{324000 - 225000}{324000} \times 100 = 30.55\%$

(∴) Sales by = old BEP in sales − new BEP in sales

$= 200000 - 225000$

$= 25000$ Adverse.

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2. Following data are available for the records of a company
Sales - Rs. 60000, variable cost - 30000.
fixed cost - 15000
(1) You are required to calculate PV ratio, break even point and margin of safty.
(i) Calculate the effect of 10% increased in sales price
(ii) Calculate the effect of 10% decreased in sales prices

Ans (i) P.V ratio $= \frac{\text{Contribution}}{\text{Sales}} \times 100$

$C = S - V.C$
$= 60000 - 30000$
$= 30000$

$= \frac{30000}{60000} \times 100$

$= 50\%$

1. BEP[in sales] $= \frac{\text{F.C} \times \text{Sales}}{\text{Contribution}}$

$= \frac{15000 \times 60000}{30000}$

$= 30000$ //

2. M/S $= \frac{\text{Actual sales} - \text{BEP in sales}}{\text{Sales}} \times 100$

$= \frac{60000 - 30000}{60000} \times 100$

$= 50\%$ //

(ii) 10% increased in sales price.

Sales = 60000
increase 10% = (+6000)
= 66000.

Contribution = S - V.C
= 66000 - 30000
= 36000

(i) P.V ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

= $\frac{36000}{66000} \times 100$

= 54.54%

- BEP in sales = $\frac{\text{Fixed cost} \times \text{Sales}}{\text{Contribution in sales}}$

= $\frac{15000 \times 66000}{36000}$

= 27500

- M/S. = $\frac{\text{Actual sales} - \text{BEP in sales}}{\text{Sales}} \times 100$

= $\frac{66000 - 27500}{66000} \times 100$

= 58.33%

Sale increase by 10% = Old BEP in sales - new BEP in sales
= 30000 - 27500
= 2500 Favor

(iii) 10% decrease in sales price.

Sales = 60000 x 10%.(-)
= 60000 - 6000
= 54000.

Contribution = S - V.C
= 54000 - 30000
= 24000.

• P.V ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

= $\frac{24000}{54000} \times 100$ = 34.44%.

• BEP in sales = $\frac{\text{Fixed cost} \times \text{Sales}}{\text{Contribution in sales}}$

= $\frac{15000 \times 54000}{24000}$

= 33750

• M/S = $\frac{\text{Actual sales} - \text{BEP in sales}}{\text{Sales}} \times 100$

= $\frac{54000 - 33750}{54000} \times 100$

= 37.5%

Sale decrease by 10% : old BEP in sales - new BEP in sales
= 30000 - 33750
= 3750 adverse.

3. From the following data calculate PV ratio, profit when sales are Rs. 20000, new break even point if selling price is reduced by 20%.
Fixed exp - Rs 4000.
BEP - Rs. 10000

⇒ P.V ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

$= \frac{8000}{20000} \times 100$

$= 40\%$.

$C = S - V.C$
$= 20000 - 12000$
$= 8000$.

(ii) BEP [in sales] = $\frac{FC \times \text{sales}}{\text{Contribution} / \text{sales} - V.C}$

$10000 = \frac{4000 \times 20000}{20000 - V.C}$

$200000000 - 10000\,V.C = 80000000$

$10000\,V.C = 200000000 - 80000000$

$10000\,V.C = 120000000$

$V.C = \frac{120000000}{10000}$

$V.C = 12000$ //

(iii) New BEP 20% ↓ Reduced.

$10000 \times 20\% = 2000$.

$10000 - 2000 = 8000$.

• PV ratio = $\frac{C}{S} \times 100$

$= \frac{10000}{20000} \times 100 \Rightarrow 50\%$.

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New BEP (Sales) = $\frac{FC \times Sales}{Sales - V.C}$

$8000 = \frac{4000 \times 20000}{20000 - VC}$

$160000000 - 8000\,VC = 80000000$

$8000\,VC = 160000000 - 80000000$

$8000\,VC = 80000000$

$VC = \frac{80000000}{8000}$

$VC = 10000/-$

4 Sales - Rs - 100000, Profit - Rs. 10000, V.C - 50%, find out PV ratio, fixed cost, ~~Sales value to earn a profit of Rs 40000~~

⇒ P.V ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$.

$= \frac{50000}{100000} \times 100$

$= 50\%$

$C = S - V.C$

$= 100000 - 50000$

$= 50000$

(ii) Sales - V.C = fixed cost + profit

$100000 - 50000 = F.C + 10000$

$50000 = F.C + 10000$

$F.C = 50000 - 10000$

$F.C = 40000/-$

5. The sales turnover and profit during 2 years were as follows

Year	Sales	Profit
2019	140000	15000
2020	160000	20000

You are required to calculate (i) PV ratio, (ii) sales required to earn a profit of Rs. 40000 (iii) Profit when sales are Rs. 120000.

⇒ P.V ratio = $\frac{\text{Change in profit}}{\text{Change in sales}} \times 100$

$= \frac{5000}{20000} \times 100$

$= 25\%$

(ii) Sales required to earn a profit of Rs. 40000.

P.V ratio = $\frac{\text{F.C + profit}}{\text{Sales}}$

$\frac{25}{100} = \frac{\text{F.C} + 15000}{140000}$

$3500000 = 100FC + 1500000$

$100FC = 3500000 - 1500000$

$100FC = 2000000$

$\text{F.C} = \frac{2000000}{100} = 20000$

- Desired sales = $\frac{\text{FC + profit}}{\text{P.V ratio}}$

$= \frac{20000 + 40000}{25\%} = \frac{60000}{25\%} = 240000$

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(iii) Profit when sales is ₹ 120000.

$$\text{Sales} = \frac{\text{Fc} + \text{profit}}{\text{P.V ratio}}$$

$$120000 = \frac{20000 + P}{25\%}$$

$$P = \frac{20000}{25\%} \times 100 = 30000 = 20000 + P$$

$$P = 30000 - 20000$$

$$\text{Profit} = 10000//$$

6. Calculate p.v ratio, sales required to earn a profit of Rs 60000 and profit when sales is Rs. 90000.

Year	Sales (₹)	Profit (₹)
2021	200000	40000
2022	250000	60000

i) $$\text{P.V ratio} = \frac{\text{Change in profit}}{\text{Change in sales}} \times 100$$

$$= \frac{20000}{50000} \times 100.$$

$$= 40\%$$

(ii) sales required to earn a profit of Rs. 60000.

$$\text{P.V ratio} = \frac{\text{f.c} + \text{profit}}{\text{Sales}}$$

$$\frac{40\%}{100} = \frac{\text{f.c} + 40000}{200000}$$

$$8000000 = 100\,\text{f.c} + 4000000$$

$$100\,\text{f.c} = 8000000 - 4000000.$$

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100 F.C = 4000000

F.C = $\frac{4000000}{100}$

F.C = 40000 //.

- Desired sales = $\frac{FC + profit}{P.V\ ratio}$

= $\frac{40000 + 60000}{40\%}$

= $\frac{100000}{40\%}$

= 250000 //.

(iii) Profit when sales is Rs. 90000.

Sales = $\frac{F.C + profit}{P.V\ ratio}$

$90000 = \frac{40000 + P}{40\%}$

- $36000 = 40000 + P$

$P = 40000 - 36000$

Profit = 4000 //.