

INTERMEDIATE COURSE

GROUP – II

REVISION TEST PAPERS

SEPTEMBER, 2025



BOARD OF STUDIES (ACADEMIC)
THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA
(Set up by an Act of Parliament)
New Delhi

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REVISION TEST PAPER, SEPTEMBER, 2025– OBJECTIVE & APPROACH

(Students are advised to go through the following paragraphs carefully to derive maximum benefit out of this RTP)

I. Objective of Revision Test Paper

Revision Test Papers are one among the many educational inputs provided by the Board of Studies (Academic) to its students. Popularly referred to as RTP by the students, it is one of the very old publications of the BOS(A) whose significance and relevance from the examination perspective has stood the test of time.

The primary objectives of the RTP are:

- To help students get an insight of their preparedness for the forthcoming examination;
- To update them on the latest developments relevant for the forthcoming examination in select subjects;
- To enhance the confidence level of the students adequately.

Students must bear in mind that the RTP contains a variety of questions based on different topics of the syllabi and thus a comprehensive study of the entire syllabus is a pre-requisite before answering the questions of the RTP. In other words, in order to derive maximum benefit out of the RTPs, it is advised that before proceeding to solve the questions given in the RTP, students ought to have thoroughly read the Study Materials and Statutory Update, wherever applicable.

The topics on which the questions are set herein have been carefully selected and meticulous attention has been paid in framing different types of questions. Detailed answers are provided to enable the students to do a self-assessment and have a focused approach for effective preparation.

Live Virtual Classes by renowned subject experts conducted free of charge for the students of Foundation, Intermediate and Final levels provide the students much required support in preparing for their exams conveniently at home as these classes can be accessed live or viewed later as recorded lectures through hand-held devices such as smart phones, laptops, I-pads, tablets, etc. anytime anywhere. Further,

students are advised to attempt the Multiple-Choice Questions (MCQs) at MCQ Paper Practice Portal which is a holistic platform for self-assessment within the stipulated timeframe.

Students are welcome to send their suggestions for fine tuning the RTP to the Joint Director, Board of Studies (Academic), The Institute of Chartered Accountants of India, A-29, Sector-62, Noida 201309 (Uttar Pradesh). RTP is also available on BOS Knowledge Portal at <https://boslive.icai.org> for downloading.

II. Planning and preparing for examination

Ideally, when the RTP reaches your hand, you must have finished reading the relevant Study Materials of all the subjects available at the BoS Knowledge Portal. Get a good grasp of the concepts/ provisions/ amendments/ cases discussed therein.

After reading the Study Materials alongwith Statutory Update thoroughly, then, proceed to solve the questions given in the RTP on your own. RTP is an effective tool to revise and refresh the concepts and provisions discussed in the Study Material. RTPs are provided to you to help you assess your level of preparation. Hence you must solve the questions given therein on your own and thereafter compare your answers with the answers given therein.

Examination tips

How well a student fares in the examination depends upon the level and depth of his preparation. However, there are certain important points which can help a student better his performance in the examination. These useful tips are given below:

- Reach the examination hall well in time.
- As soon as you get the question paper, read it carefully and thoroughly. You are given separate 15 minutes for reading the question paper.
- Plan your time so that appropriate time is awarded for each question.
- First impression is the last impression. The question which you can answer in the best manner should be attempted first.

- Always attempt to do all questions. Therefore, it is important that you must finish each question within allocated time. Keep sometime for checking the answers as well.
- Read the question carefully more than once before starting the answer to understand very clearly as to what is required.
- Answer all parts of a question one after the other; do not answer different parts of the same question at different places.
- Write in a neat and legible hand-writing.
- Always be concise and write to the point and do not try to fill pages unnecessarily.
- There must be logical expression of the answer.
- In case a question is not clear, you may state your assumptions and then answer the question.
- Check your answers carefully and underline important points before leaving the examination hall.
- In case of case scenario based MCQs, read the facts given in the case attentively. Also, read each MCQ based thereon and all the options carefully, before choosing the correct answer.

III. Subject-wise Applicability

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

The Revision Test Paper (RTP) of Cost and Management Accounting comprises of two Divisions of total 18 questions: Division A (Case scenario and caselet based MCQs) which contains 6 case scenarios and caselets and Division B (Descriptive questions) which contains 12 questions for full coverage of the syllabus. Theoretical questions along with computational problems have also been incorporated so that you are able to give emphasis to the theoretical portion of the syllabus as well. Since this paper's inclination is more towards numerical-oriented questions which involve mathematical calculations, therefore, it is very important that you have thoroughly studied the theoretical aspects of the subject and are also clear about the concepts and logic behind the mathematical workings and formulae.

A summary of the questions both theoretical and computational has been given for your reference:

Q. No.	Topic	About the Problem
Division A		
1.	Standard Costing	Calculation of required figures through different variances.
2.	Activity Based Costing (ABC) Method	Analysis of product line through ABC.
3.	Employee Cost	Calculation of budgeted direct labour hours.
4.	Cost Accounting System	Journal entry.
5.	Joint product and by product	Calculation of apportioned joint cost.
6.	Marginal Costing	Calculation of projected sales.
Division B		
7.	Material Costing	Calculation of stock levels and profitability analysis.
8.	Employee Cost	Calculation of labour cost under different systems.
9.	Overheads	Allocation of Overheads and calculation of overhead absorption rate.
10.	Cost Sheet	Preparation of Statement of Cost.
11.	Cost Accounting System	Preparation of Costing and Financial P&L and Reconciliation Statement.
12.	Job and Batch Costing	Calculation of cost and selling price.
13.	Process Costing	Preparation of processes account and P&L A/c.
14.	Joint product and by product	Calculation of joint cost and profit.
15.	Service Costing	Calculation of cost of electricity generated.

16.	Marginal Costing	Analysis of Product Mix.
17.	Budget and Budgetary Control	Preparation of production budget, material consumption and purchase budget.
18(a)	Introduction to Cost and Management Accounting	Cost Accounting v/s Management Accounting.
18(b)	Activity Based Costing (ABC) Method	Stages in implementation of ABC.
18(c)	Budget and Budgetary Control	Fixed v/s Flexible Budget.
18(d)	Introduction to Cost and Management Accounting	Cost Unit and their examples.

PAPER – 5: AUDITING AND ETHICS

The Revisionary Test Paper (RTP) is a tool to refresh your knowledge which you have acquired while doing your conceptual study from Study Material and other modes of knowledge like BoS Live Learning Classes, Webinars, Saransh – Last Mile Referencer, Case Scenarios Booklet, Model Test Papers, Students' Journal, Bare Acts etc.

RTP of Auditing and Ethics for September 2025 comprises twenty questions, including case scenario-based multiple-choice questions, independent multiple choice questions, and descriptive questions. These questions cover the entire syllabus, which is divided into eleven chapters as discussed in the study material.

These 20 questions are taken from different topics like Nature, Objective and Scope of Audit, Audit Strategy, Audit Planning and Audit Program, Risk Assessment and Internal Control, Audit Evidence, Audit of Items of Financial Statements, Audit Documentation, Completion and Review, Audit Report, Special Features of Audit of Different Type of Entities, Audit of Banks and Ethics and Terms of Audit Engagements. The chapter's name is clearly indicated before each question. The questions in the RTP have been arranged in the same sequence as prescribed in the study material to facilitate easy revision by the students. An attempt has been made to cover the syllabus comprehensively.

PAPER – 6: FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT**Section – A: Financial Management**

The Revision Test Paper (RTP) of Financial Management comprises of two Divisions of total 10 questions: Division A (Case scenario based MCQs) which contains 1 case scenario and 2 caselets and Division B (Descriptive questions) which contains 7 questions for full coverage of the syllabus. Theoretical questions along with computational problems have also been incorporated so that you are able to give emphasis to the theoretical portion of the syllabus as well. Since this paper's inclination is more towards numerical-oriented questions which involve mathematical calculations, therefore, it is very important that you have thoroughly studied the theoretical aspects of the subject and are also clear about the concepts and logic behind the mathematical workings and formulae.

A summary of the questions both theoretical and computational has been given for your reference:

Q. No.	Topic	About the Problem
Division A		
1.	Investment Decision	Analysis for a project.
2.	Ratio Analysis	Interest Coverage ratio
3.	Cost of Capital	Analysis of cost
Division B		
4.	Ratio Analysis	Preparation of balance sheet.
5.	Cost of Capital	Calculation of WACC.
6.	Capital Structure	Advise best financing option.
7.	Leverage	Preparation of Income Statement.
8.	Dividend Decision	Calculation of rate of return
9.	Working Capital	Determination of Effective cost of Factoring.
10(a)	Types of Financing	Sources of funds.

10(b)	Working Capital	Trade Credit v/s Bank Overdraft.
10(c)	Working Capital	Trade-offs between components of working capital.

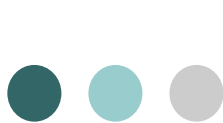
Section – B: Strategic Management

The Revision Test Paper on the subject of Strategic Management for the September 2025 examination contains sixteen questions. The questions have been selected from all the sections/chapters uniformly to cover whole syllabus. Questions are based on different skill levels, i.e., "Comprehension & Knowledge" as well as "Analysis & Application".

The questions included are of different categories – multiple choice questions based on case scenario and application based multiple choice questions, distinguish between, short notes, descriptive and questions based on practical scenarios. The first question contains multiple choice questions based on case scenario are subdivided into five different parts. Questions from two to six are application based multiple choice questions. All multiple-choice questions are given with four alternatives and the student has to opt for the correct option. Subsequently, ten different questions have been included to cover all the five chapters of the syllabus. Chapter names have been mentioned before questions. A descriptive question based on practical scenario has been included from each section. Another descriptive question has also been included from each section of the syllabus.

The students should take up this Revision test paper as a tool to check their preparedness in the subject. Mere reading of Revision Test Paper will not be helpful. To properly self-assess the preparation in the subject, students must attempt the questions on their own. Compare your answers with the suggested answers and hints given to assess the level of preparation and identify areas where more focus is required. Then you may work on these areas to improve the quality of answers that you write.

Work hard and perform well in the examination!



PAPER – 4: COST AND MANAGEMENT ACCOUNTING



QUESTIONS

PART I - Case Scenario based MCQs

Standard Costing

1. ALZO Toys Ltd. is an exciting new player in the toy manufacturing industry, founded with a passion for creating high-quality, engaging, and educational toys. The company aims to make a positive impact on the industry and also on the development of young minds through imaginative play.

The following statement provides a comprehensive analysis of the various cost variances for a particular period, outlining the differences between the expected costs and the actual expenditures incurred.

Cost variances	(₹)
Direct material price	25,000F
Direct material usage	3,750A
Direct labour rate	5,000A
Direct labour efficiency	3,750A
Variable overhead expenditure	15,000A
Variable overhead efficiency	1,875A
Fixed overhead expenditure	62,500F

The budget for the same period reflected the following data:

Production volume	7,500 units
Direct materials purchased	3,750kg
Direct materials used	3,750kg
Direct material cost	₹ 1,12,500
Direct labour hours	5,625 hours
Direct labour cost	₹ 1,12,500
Variable overhead cost	₹ 56,250
Fixed overhead cost	₹ 1,12,500

Some other information relating to the same period is provided below:

- (i) Stocks of raw materials and finished goods are valued at a predetermined standard cost for easier cost comparison and reporting.
- (ii) The actual number of units produced was 7,750.
- (iii) The direct materials purchased were 5,000 kg.

From the information given above, you are required to FIGURE OUT the following in actual:

- (i) Quantity of materials used and direct material cost-
 - (a) 3,875 kg and ₹ 1,50,000
 - (b) 3,875 kg and ₹ 1,25,000
 - (c) 4,000 kg and ₹ 1,25,000
 - (d) 4,000 kg and ₹ 1,50,000
- (ii) Direct labour hours-
 - (a) 7,937.50 hours
 - (b) 6,000 hours
 - (c) 5,812.50 hours
 - (d) 5,000 hours

- (iii) Direct labour cost-
 - (a) ₹ 1,16,250
 - (b) ₹ 1,25,000
 - (c) ₹ 1,55,000
 - (d) ₹ 1,63,750
- (iv) Variable overhead cost-
 - (a) ₹ 75,000
 - (b) ₹ 73,125
 - (c) ₹ 60,000
 - (d) ₹ 58,125
- (v) Fixed overhead cost-
 - (a) ₹ 1,75,000
 - (b) ₹ 1,12,500
 - (c) ₹ 62,500
 - (d) ₹ 50,000

Activity based Costing

2. With the rise in carbon dioxide, a greenhouse gas, release in the environment, when fossil fuels are burned, Earth's natural greenhouse effect is becoming too weak causing global warming.

To contribute towards global environment for the betterment, various cars and scooters manufacturing companies are shifting their production towards electric vehicles (EVs) manufacturing. Companies are heavily investing in research, development and production of EVs.

Olay Ltd. is also one the companies belonging to scooter manufacturing industry. Watching its rivalries shifting their production to EVs, the management of Olay Ltd. decided to take the advantage of this open opportunity.

It had been only 4 years since the company started its production of EVs, but last year, the management of the company also decided to expand

its product line to 3 variants of the scooter, viz., Olay EV Max, Olay EV Ultra and Olay EV Pro.

The following information is provided for the current year from the books of Olay Ltd.:

	Olay EV Max	Olay EV Ultra	Olay EV Pro
Average revenue per unit (₹)	84,975	1,15,500	2,17,800
Average cost of goods sold per unit (₹)	82,500	1,10,000	1,98,000

Last year, when the company initially expanded its product line, the sales were not much noticeable comparative to its earlier category of scooters. The company could only sold 528, 330 and 110 units of Olay EV Max, Olay EV Ultra and Olay EV Pro respectively against the order received of 616, 396 and 165 units respectively. However, with the increasing awareness about the EVs, more people started buying EVs and, during the current year, the company's order and sales jumped to five times the last year.

For earlier years, Olay Ltd. used gross margin percentage method to evaluate the relative profitability for all of its EVs.

However, from current year, company plans to use activity based costing for analysing the profitability.

The Activity analysis of Olay Ltd. is as under:

Activity Area	Cost-allocation base
Customer purchase order processing	Purchase orders by customers
Line-item ordering	Line-items per purchase order
Store delivery	Unit sold
Cartons dispatched to stores	Cartons dispatched to a store per Unit
Shelf-stocking at customer store	Hours of shelf-stocking

All the support costs for the current year amounts to ₹ 66,23,760. These support costs are assigned to all the activity areas. The cost in each area

and the quantity of the cost allocation basis used in that area are as follows:

Activity Area	Total costs (₹)	Total Units of Cost-allocation base
Line-item ordering	14,04,480	66,110 line items
Cartons dispatched to store	16,72,000	3,39,240 cartons
Shelf-stocking at customer store	2,25,280	2,904 hours

The Customer purchase order processing costs ₹ 17,60,000 along with the store delivery cost of ₹ 15,62,000.

Some of the other information is also provided below:

	Olay EV Max	Olay EV Ultra	Olay EV Pro
Average number of line items per order	10	12	14
Average number of cartons shipped per store unit	16	80	300
Average number of hours of shelf-stocking per store delivery	0.1	0.6	3

The company wants you to FIGURE OUT the following to ascertain which of the product line is more profitable:

- (i) For the current year, how much is the order received and the units sold for Olay EV Max, Olay EV Ultra and Olay EV Pro respectively?
 - (a) Order received- 616, 396 and 165 units; sold- 528, 330 and 110 units of Olay EV Max, Olay EV Ultra and Olay EV Pro respectively.
 - (b) Order received- 3,696, 2,376 and 990 units; sold- 3,168, 1,980 and 660 units of Olay EV Max, Olay EV Ultra and Olay EV Pro respectively.
 - (c) Order received- 528, 330 and 110 units; sold- 616, 396 and 165 units of Olay EV Max, Olay EV Ultra and Olay EV Pro respectively.

- (d) Order received- 3,080, 1,980 and 825 units; sold- 2,640, 1,650 and 550 units of Olay EV Max, Olay EV Ultra and Olay EV Pro respectively.
- (ii) The total gross-margin percentage and the operating income percentage, for the current year would be:
- (a) Gross-margin - 3.72% and Operating income - 4.96%
- (b) Gross-margin - 4.96% and Operating income - 3.72%
- (c) Gross-margin - 4.96% and Operating income - 4.96%
- (d) Gross-margin - 3.72% and Operating income - 3.72%
- (iii) The cost driver rate relating to all the five activity areas would be:
- (a) Customer purchase order processing- ₹ 363.64 per order, Line item ordering- ₹ 21.24 per line item order, Store delivery- ₹ 265.42 per unit sold, Cartons dispatched- ₹ 4.93 per dispatch and Shelf-stocking at customer store- ₹ 77.58 per hour.
- (b) Customer purchase order processing- ₹ 299.07 per order, Line item ordering- ₹ 21.24 per line item order, Store delivery- ₹ 322.73 per unit sold, Cartons dispatched- ₹ 4.93 per dispatch and Shelf-stocking at customer store- ₹ 77.58 per hour.
- (c) Customer purchase order processing- ₹ 299.07 per order, Line item ordering- ₹ 77.58 per line item order, Store delivery- ₹ 322.73 per unit sold, Cartons dispatched- ₹ 4.93 per dispatch and Shelf-stocking at customer store- ₹ 21.24 per hour.
- (d) Customer purchase order processing- ₹ 322.73 per order, Line item ordering- ₹ 21.24 per line item order, Store delivery- ₹ 299.07 per unit sold, Cartons dispatched- ₹ 4.93 per dispatch and Shelf-stocking at customer store- ₹ 77.58 per hour.

- (iv) The operating cost of the individual product line, as per the method proposed for the current year w.r.t. profitability analysis, would be:
- (a) Olay EV Max- ₹ 16,11,013, Olay EV Ultra- ₹ 23,56,890 and Olay EV Pro- ₹ 26,56,059
 - (b) Olay EV Max- ₹ 23,56,890, Olay EV Ultra- ₹ 26,56,059 and Olay EV Pro- ₹ 16,11,013
 - (c) Olay EV Max- ₹ 26,56,059, Olay EV Ultra- ₹ 16,11,013 and Olay EV Pro- ₹ 23,56,890
 - (d) Olay EV Max- ₹ 26,56,059, Olay EV Ultra- ₹ 23,56,890 and Olay EV Pro- ₹ 16,11,013
- (v) Operating income as a percentage of revenues of each product line, namely Olay EV Max, Olay EV Ultra and Olay EV Pro, when all the support costs are allocated using an activity-based costing system would be:
- (a) Olay EV Max- 1.73%, Olay EV Ultra- 3.53% and Olay EV Pro- 7.75%
 - (b) Olay EV Max- 1.18%, Olay EV Ultra- 1.24% and Olay EV Pro- 1.34%
 - (c) Olay EV Max- 2.91%, Olay EV Ultra- 4.76% and Olay EV Pro- 9.09%
 - (d) Olay EV Max- 1.78%, Olay EV Ultra- 3.70% and Olay EV Pro- 8.52%

Employee Cost and Direct Expenses

3. Suppose the units of a product are produced at the rate of 4 units per useful direct labour hour. Direct labour idle time is 10% of hours paid for. Sales of 1,000 units are budgeted and finished goods stock is expected to rise by 100 units. The budgeted direct labour hours for the production would be:
- (a) 306
 - (b) 250

Product	Sales (units)	Finished Goods (units)	
		Opening stock	Closing stock
A	1,14,000	1,900	5,700
B	76,000	7,600	3,800

Joint production costs for the last month amounted to ₹ 20,90,000. These costs were allocated between both the joint products, A and B, based on the number of units produced. This method of apportioning costs ensures that each product is fairly charged for its share of the overall production expenses.

CALCULATE the joint production costs apportioned to product A for last month?

- (a) ₹ 12,12,200
- (b) ₹ 12,54,000
- (c) ₹ 12,95,800
- (d) ₹ 13,58,500

Marginal Costing

6. A company's sales could decrease by 50% before it starts incurring losses. And, for every Re. 1 of sales, it can contribute 40 paise towards fixed costs and generating profit. For the current year, the company's fixed cost amounts to ₹ 5,00,000.

CALCULATE the Projected sales.

- (a) ₹ 10,00,000
- (b) ₹ 12,50,000
- (c) ₹ 20,83,333
- (d) ₹ 25,00,000

PART - II Descriptive Questions**Material Cost**

7. XYZ Ltd is engaged in the business of manufacturing product "A". The material required for the manufacture of Product A is Material "B". Each unit of Product A requires 2 Kgs of Material B, however the yield of each unit of Material B is 80% of the input.

The Details governing the production requirements for the year is as follows:

- | | | | |
|----|---|---|---------------|
| a. | Projected sales of product A for the period | - | 10,000 units. |
| b. | Opening stock of product A | - | 948 units |
| c. | Opening stock of Raw Material B | - | 2,630 Kgs |
| d. | Ordering cost per order | - | ₹500 |
| e. | Rate of Overdraft | - | 12.5% |
| f. | Obsolescence Rate | - | 12.5% |
| g. | Purchase price of Material B | - | ₹ 20 per Kg |
| h. | Current purchase policy | - | Quarterly |
| i. | Max usage is more than minimum usage by | - | 100 Kgs |
| j. | Waiting time from date of order | - | 4 to 8 days |

Based on the above information determine the following:

- i. Economic Order Quantity
- ii. Re-Order Quantity
- iii. Re-Order Level
- iv. Maximum Stock
- v. Minimum Stock
- vi. Profitability analysis on EOQ v. ROQ
- vii. If a volume discount of 5% is provided for a quarterly purchase by the supplier, will your answer to (vi) above change?

Employee Cost and Direct Expenses

8. The existing incentive system of Sakshi Limited is as under:

Normal working week	5 days of 8 hours each plus 3 late shifts of 3 hours each
Rate of Payment	Day work: ₹ 160 per hour Late shift: ₹ 225 per hour
Average output per operator for 49-hours week i.e. including 3 late shifts	240 articles

In order to increase output and eliminate overtime, it is decided to switch on to a system of payment by results. The following information is obtained:

Time-rate (as usual)	: ₹ 160 per hour
Basic time allowed for 15 articles	: 2.5 hours
Piece-work rate	: Add 20% to basic piece-rate
Premium Bonus	: Add 50% to time.

If during the last week 270 articles are produced in a 40-hour week.

Required:

- (i) CALCULATE weekly earnings for one operator under the following systems:
 - (a) Existing time-rate
 - (b) Straight piece-work
 - (c) Rowan system
 - (d) Halsey premium system
- (ii) PREPARE a Statement showing hours worked, weekly earnings, number of articles produced and labour cost per article for one operator under the above systems.

Overheads- Absorption Costing Method

9. SA Ltd. has three production (M_1 , M_2 and A_1) and three service departments (Stores, Engineering services and General service). Engineering department serves the M_1 and M_2 only.

The relevant information related with Product X and Y are as follows:

	Product X	Product Y
M_1	10 Machine hours	6 Machine hours
M_2	4 Machine hours	14 Machine hours
A_1	14 Direct labour hours	18 Direct labour hours

The annual budgeted overhead cost for the year is

	Indirect Wages (₹)	Consumable Supplies (₹)
M_1	9,30,400	2,52,000
M_2	8,26,800	3,64,000
A_1	3,24,400	84,000
Stores	1,64,000	56,000
Engineering Service	1,06,800	84,000
General Service	1,50,400	64,000

	(₹)	
– Depreciation on Machinery	7,92,000	
– Insurance of Machinery	1,44,000	
– Insurance of Building	64,800	(Total building insurance cost for M_1 is one third of annual premium)
– Power	1,29,600	
– Light	1,08,000	
– Rent	2,53,500	(The general service deptt. is located in a

		building owned by the company. It is valued at ₹ 1,20,000 and is charged into cost at notional value of 8% per annum. This cost is additional to the rent shown above)
The value of issues of materials to the production departments are in the same proportion as shown above for the Consumable supplies.		

The following data are also available:

Department	Book value Machinery (₹)	Area (Sq. ft.)	Effective H.P. hours %	Production Direct Labour hour	Capacity Machine hour
M ₁	24,00,000	5,000	50	2,00,000	40,000
M ₂	18,00,000	6,000	35	1,50,000	50,000
A ₁	6,00,000	8,000	05	3,00,000	—
Stores	2,40,000	2,000	—	—	—
Engg. Service	7,20,000	2,500	10	—	—
General Service	2,40,000	1,500	—	—	—

Required:

- PREPARE an overhead analysis sheet, showing the bases of apportionment of overhead to departments.
- PREPARE a statement allocating service department overheads to production department ignoring the apportionment of service department costs among service departments.
- CALCULATE suitable overhead absorption rate for the production departments.
- CALCULATE the overheads to be absorbed by two products, X and Y.

Cost Sheet

10. The accounts of Ranu Ltd for the year ended 31st March, 2025, shows the following:

Particulars	(₹)
Carriage Inward	7,150
Administrative Office Salaries	12,600
Bad debts written off	6,500
Carriage Outward	4,300
GST (ITC Allowed)	10,000
Salaries related to factory office	7,000
Production Wages	1,20,000
Repairs - Plant and Machinery	4,450
Rent, Rates, Taxes, Insurance etc.	
Factory	8,500
Office	2,000
Sales	4,50,000
Stock of Raw materials:	
1 st April, 2024	50,000
31 st March, 2025	64,500
Materials Purchased (excluding GST)	2,00,000
Travelling Expenses	2,100
Manager's Salary (1/4 Office and 3/4 Factory)	10,000
Depreciation on Plant and Machinery	6,500
Depreciation on Office Furniture	500
Director's Fees	6,000
Gas and Water (Factory)	1,500
Gas and Water (Office)	500
General Expenses	3,400

You are required to PREPARE a cost statement for the year ended 31st March, 2025.

Cost Accounting Systems

11. The following figures have been taken from the financial accounts of a manufacturing firm for the year ended 31st March, 2025:

	(₹)
Direct material consumption	20,00,000
Direct wages	12,00,000
Factory overheads	6,40,000
Repair and maintenance (Factory-related)	48,000
Advertisement expenses (for brand building – capital in nature)	40,000
Administrative overheads	2,80,000
Selling and distribution overheads	3,84,000
Bad debts	32,000
Preliminary expenses written off	16,000
Legal charges	4,000
Depreciation on Plant and Machinery	1,20,000
Interest on Loan	60,000
Dividends received	40,000
Interest on fixed deposit	8,000
Sales- 48,000 units	48,00,000
Closing stock:	
- Finished stock- 4,000 units	3,20,000
- Work-in-process	96,000

The cost accounts for the same period reveal that the direct material consumption was ₹ 22,40,000; Factory overhead (including factory related repairs and maintenance and depreciation) is recovered at 20% on prime cost; Administration overhead is recovered @ ₹ 4.8 per unit of

cost of goods sold and selling and distribution overheads are recovered at ₹6.40 per unit sold.

Required:

PREPARE Costing and Financial Profit & Loss Accounts and RECONCILE the difference in the profit as arrived at in the two sets of accounts.

Job and Batch Costing

12. Pinku Confectioners (PC) owns a bakery which is used to make bakery items like pastries, cakes and muffins. PC use to bake atleast 50 units of any item at a time. A customer has given an order for 600 cakes. To process a batch of 50 cakes, the following cost would be incurred:

Direct materials- ₹ 5,000

Direct wages- ₹ 500

Oven set- up cost ₹ 750

PC absorbs production overheads at a rate of 20% of direct wages cost. 10% is added to the total production cost of each batch to allow for selling, distribution and administration overheads.

PC requires a profit margin of 25% of sales value.

Required:

- (i) Determine the price to be charged for 600 cakes.
- (ii) Calculate cost and selling price per cake.
- (iii) What would be selling price per unit If the order is for 605 cakes.

Process & Operation Costing

13. A product passes through three processes – A, B and C. The details of expenses incurred on the three processes during the year 2025 were as under:

Process	A	B	C
Units issued / introduced cost per unit ₹ 100	10,000		

	₹	₹	₹
Sundry Materials	10,000	15,000	5,000
Labour	30,000	80,000	65,000
Direct Expenses	6,000	18,150	27,200
Selling price per unit of output	120	165	250

Management expenses during the year were ₹ 80,000 and selling expenses were ₹ 50,000 these are not allocable to the processes.

Actual output of the three processes was:

A – 9,300 units, B-5,400 units and C-2,100 units. Two third of the output of Process A and one half of the output of Process B was passed on to the next process and the balance was sold. The entire output of process C was sold.

The normal loss of the three processes, calculated on the input of every process was:

Process A-5%; B-15% and C-20%

The Loss of Process A was sold at ₹ 2 per unit, that of B at ₹ 5 per unit and of Process C at ₹ 10 per unit.

Prepare the Three Processes Accounts and the Profit and Loss Account.

Joint Products and By products

14. A company processes a raw material in its Department 1 to produce three products, viz. A, B and X at the same split-off stage. During a period 1,80,000 kgs of raw materials were processed in Department 1 at a total cost of ₹ 12,88,000 and the resultant output of A, B and X were 18,000 kgs, 10,000 kgs and 54,000 kgs respectively. A and B were further processed in Department 2 at a cost of ₹ 1,80,000 and ₹ 1,50,000 respectively.

X was further processed in Department 3 at a cost of ₹1,08,000. There is no waste in further processing. The details of sales affected during the period were as under:

	A	B	X
Quantity Sold (kgs.)	17,000	5,000	44,000
Sales Value (₹)	12,24,000	2,50,000	7,92,000

There were no opening stocks. If these products were sold at split-off stage, the selling prices of A, B and X would have been ₹ 50, ₹ 40 and ₹ 10 per kg respectively. Required:

- (i) Prepare a statement showing the apportionment of joint costs to A, B and X.
- (ii) Present a statement showing the cost per kg of each product indicating joint cost and further processing cost and total cost separately.
- (iii) Prepare a statement showing the product wise and total profit for the period.
- (iv) State with supporting calculations as to whether any or all the products should be further processed or not

Service Costing

15. Due to frequent power cuts and inconsistent water supply from the Electricity Board, Anju Manufacturing Pvt. Ltd. — a mid-sized engineering goods manufacturer based in Pune — decided to set up its own captive power generation plant. The plant is critical for ensuring uninterrupted production across its two major units:
 - Unit 1: Produces industrial machinery components (highly power-intensive operations)
 - Unit 2: Manufactures agricultural equipment parts (moderate power load)

The factory operations heavily depend on continuous electric and water supply for running CNC machines, foundry operations, welding units, and assembly lines. Any electricity failure leads to major production delays, idle labour costs, and penalties from clients due to late deliveries.

After analysing the risk of depending entirely on the electricity board, the company's Board of Directors approved a proposal to invest in a

dedicated steam boiler and power generation plant within the factory premises.

The following information has been taken from the records in connection with the generation of power during the month:

- Coal used 1,800 Tonnes @ ₹ 230 per tonne
- Freight and handling charges: 7% of the value of coal used.
- Oil: 15 Tonnes @ ₹ 4,500 per tonne
- Water: 80,000 litres @ ₹ 0.07 per litre
- Steam boiler cost ₹ 50,00,000 with a residual value of ₹ 2 lakh after a life of 10 years.
- Salaries and wages of the boiler house:
 - 15 skilled workers @ ₹ 1,300 per month each
 - 30 semi-skilled workers @ ₹ 1,100 per month each
 - 50 unskilled workers @ ₹ 900 per month each
- Recovery on account of sale of ashes: 150 tonnes @ ₹ 60 per tonne.
- Salary and wages of generating station:
 - 60 skilled workers @ ₹ 1,200 per month each
 - 20 semi-skilled workers @ ₹ 1,000 per month each
 - 30 unskilled workers @ ₹ 850 per month each
- Repairs and maintenance of generating equipment: ₹ 30,000
- Depreciation of generating equipment: ₹ 75,000
- Insurance premium on generating plant: ₹ 15,000
- Fuel handling and storage expenses: ₹ 8,000
- Rent of generating station premises: ₹ 12,000
- Share of administration charges: ₹ 65,000
- Total number of units generated (before losses): 2,00,000 units
- Normal losses in the process: 3,000 units generated.

- Electricity purchased from grid to meet emergency requirements: 5,000 units @ ₹ 6 per unit.
- 10% of the effective units generated are used internally by the generator department itself

Additional Information:

- The purchased electricity units are not subject to any loss adjustment.
- Emergency purchase units should be added to the effective units available for use.

You are required to CALCULATE the total cost of electricity generated and the cost of generating electricity per unit.

Marginal Costing

16. N.P. Ltd. produces two products P and Q. The draft budget for the next month is as under:

	P	Q
Budgeted Production and Sales (units)	40,000	80,000
Selling Price ₹ / unit	25	50
Total Costs ₹ / unit	20	40
Machine Hours / unit	2	1
Maximum Sales Potential (units)	60,000	1,00,000

The fixed expenses are estimated at ₹ 9,60,000 per month. The company absorbs fixed overheads on the basis of machine hours which are fully utilised by the budgeted production and cannot be further increased.

When the budget was discussed, the Managing Director stated that the product mix should be altered to yield optimum profit.

The Marketing Director suggested that he would introduce a new Product-C, each unit of which will take 1.5 machine hours. However, a new machine involving a capital outlay of ₹ 2,00,000 is to be installed for processing Product-C. The additional fixed overheads relating to the

new machine was estimated at ₹ 60,000 per month. The variable cost of Product- C was estimated at ₹ 21 per Unit.

Required:

- (i) Calculate the profit as per draft budget for the next month.
- (ii) Revise the product mix based on data given for P and Q to yield optimum profit.
- (iii) The company decides to discontinue either Product- P or Q whichever is giving lower profit and proposes to substitute Product- C instead. Fix the selling price of product- C in such a way as to yield 15% return on additional capital employed besides maintaining the same overall profit as envisaged in (ii) above.

Budgets and budgetary control

17. X Ltd. has carefully analyzed market trends and consumer behaviour to project its sales figures for the upcoming year as follows:

Quarter	Sales (Units)
I	45,000
II	56,250
III	61,875
IV	67,500

Information regarding production and finished goods stock is as follows:	
Opening Stock of Finished Goods	11,250 Units
Expected Closing Stock of Finished Goods at the end of the year	18,375 Units
Production Pattern	75% of Current Quarter Sales
	Plus 25% of Next Quarter Sales
Closing Stock of current quarter to be maintained	25% of Next Quarter Sales

Further information regarding stock of raw materials is as follows:

Opening Stock of Raw Materials	15,000 Units
Required Closing Stock of Raw Materials at the end of the year	7,500 Units

Each unit of finished output requires 4 kg. of raw materials.

The company plans to acquire its total annual requirement of raw materials during the first three quarters, in the specified proportions and at the prices detailed below:

Quarter	Purchase of raw materials % to total annual requirement in quantity	Price per kg. (₹)
I	25%	12
II	50%	13
III	25%	14

You are required to PREPARE the following for the next year, quarter wise:

- (i) Production budget (in units).
- (ii) Raw material consumption budget (in quantity).
- (iii) Raw material purchase budget (in quantity).
- (iv) Raw material purchase budget (in value).

Miscellaneous

18. (a) Though Cost Accounting and Management Accounting are used synonymously, but there are a few differences. ENUMERATE any five differences.
- (b) A manufacturing company based in India is planning to transition from its traditional costing system to Activity-Based Costing (ABC) in order to improve cost accuracy and gain better insights into product profitability. Given the company's diverse product portfolio and the complexity of its production processes, the

implementation of ABC is expected to provide a more precise allocation of overheads.

You are required to SUGGEST the key practical stages involved in successfully implementing an Activity-Based Costing system.

- (c) Fixed Budget does not change with actual volume of activity achieved, however, Flexible Budget can be re-casted on the basis of activity level to be achieved. DISCUSS other differences between these two type of budget classified based on their capacity.
- (d) DESCRIBE cost unit and give EXAMPLE(S) of cost unit for the following Industry or Product:

Industry or Product
Construction
Transport
Technology
Oil
Gas
Electricity



SUGGESTED ANSWERS/HINTS

1. (i) (c) **Calculation of actual quantity of materials used:**

Standard quantity of material used per units of output

$$= \left(\frac{\text{budgeted usage}}{\text{budgeted production}} \right)$$

$$= \left(\frac{3,750 \text{ kg}}{7,500 \text{ units}} \right) = 0.5 \text{ kg}$$

$$\text{Standard price} = \left(\frac{\text{budgeted material cost}}{\text{budgeted usage}} \right)$$

$$= \left(\frac{\text{₹ } 1,12,500}{3,750 \text{ kg}} \right) = \text{₹ } 30$$

$$\begin{aligned}
 \text{Material usage variance} &= (\text{Std. qty. for actual output} - \text{Actual qty.}) \times \text{Std. price} \\
 ₹ 3,750A &= [(7,750 \times 0.5\text{kg}) - AQ] \times ₹ 30 \\
 - ₹ 3,750 &= ₹ 1,16,250 - 30AQ \\
 30AQ &= ₹ 1,20,000 \\
 AQ &= 4,000 \text{ kg}
 \end{aligned}$$

Actual quantity of materials used = **4,000 kg**

Calculation of actual direct material cost:

$$\begin{aligned}
 \text{Material Price Variance} &= \text{Actual Quantity purchased (AQ)} \times \{\text{Std. Price (SP)} - \text{Actual Price(AP)}\} \\
 ₹ 25,000F &= 5,000 \text{ kg} \times (₹ 30 - AP) \\
 ₹ 25,000 &= ₹ 1,50,000 - 5,000 AP \\
 5,000 AP &= ₹ 1,25,000 \\
 AP &= ₹ 25
 \end{aligned}$$

Actual direct material cost = 5,000 kg x ₹ 25 = ₹ **1,25,000**

(ii) (b) Standard hours per unit of output = $\left(\frac{\text{Budgeted hours}}{\text{Budgeted output}} \right)$

$$= \left(\frac{5,625 \text{ hours}}{7,500 \text{ units}} \right) = 0.75 \text{ hours}$$

Standard wage rate = $\left(\frac{\text{budgeted labour cost}}{\text{budgeted hours}} \right)$

$$= \left(\frac{₹ 1,12,500}{5,625 \text{ hours}} \right) = ₹ 20$$

Labour Efficiency Variance = Std. Rate (SR) x {Std. Hours (SH) – Actual Hours (AH)}

$$\begin{aligned}
 ₹ 3,750A &= ₹ 20 \times [(7,750 \times 0.75 \text{ hours}) - AH] \\
 - ₹ 3,750 &= ₹ 1,16,250 - 20AH
 \end{aligned}$$

$$20AH = ₹ 1,20,000$$

$$AH = 6,000$$

$$\text{Actual Hours} = \mathbf{6,000}$$

$$\text{(iii) (b) Labour Cost Variance} = [\text{Standard Labour Cost} - \text{Actual Labour Cost}]$$

$$\text{Labour Rate Variance} + \text{Labour Efficiency Variance} = [\text{Standard Labour Cost} - \text{Actual Labour Cost}]$$

$$₹ 5,000A + ₹ 3,750A = (7,750 \times 0.75 \text{ hours} \times ₹ 20) - \text{Actual Labour Cost}$$

$$- ₹ 5,000 - ₹ 3,750 = ₹ 1,16,250 - \text{Actual Cost}$$

$$\text{Actual Labour Cost} = ₹ 1,16,250 + ₹ 8,750$$

$$\text{Actual Labour Cost} = ₹ \mathbf{1,25,000}$$

$$\text{(iv) (a) Standard variable overhead per unit} = \left(\frac{\text{Budgeted variable overheads cost}}{\text{Budgeted output}} \right)$$

$$= \left(\frac{₹ 56,250}{7,500 \text{ units}} \right) = ₹ 7.50$$

$$\text{Total Variable Overhead Variance} = [\text{Standard Variable Overhead} - \text{Actual Variable Overhead}]$$

$$\text{Variable Overhead Expenditure Variance} + \text{Variable Overhead Efficiency Variance} = [\text{Standard Variable Overhead} - \text{Actual Variable Overhead}]$$

$$₹ 15,000A + ₹ 1,875A = (7,750 \times ₹ 7.50) - \text{Actual Variable Overhead}$$

$$- ₹ 15,000 - ₹ 1,875 = ₹ 58,125 - \text{Actual Variable Overhead}$$

$$\text{Actual Variable Overhead} = ₹ 58,125 + ₹ 16,875$$

$$\text{Actual Variable Overhead} = ₹ \mathbf{75,000}$$

- (v) (d) Fixed Overhead Expenditure Variance = Budgeted Fixed Overheads - Actual Fixed Overheads
 $\text{₹ } 62,500 \text{ F} = \text{₹ } 1,12,500 - \text{Actual Fixed Overheads}$
 Actual Fixed Overheads = **₹ 50,000**

Summary

- (i) (d) **4,000 kg and ₹ 1,25,000**
 (ii) (b) **6,000 hours**
 (iii) (b) **₹ 1,25,000**
 (iv) (a) **₹ 75,000**
 (v) (d) **₹ 50,000**
2. (i) (d)

Particulars	Olay EV Max (units)	Olay EV Ultra (units)	Olay EV Pro (units)	Total (units)
Previous year order received	616	396	165	1177
Current Year order (5 times the last year)	3,080	1,980	825	5,885
Previous year sales	528	330	110	968
Current Year sales (5 times the last year)	2,640	1,650	550	4,840

- (ii) (b) **Statement of gross margin percentage and operating income percentage**

Particulars	Olay EV Max	Olay EV Ultra	Olay EV Pro	Total
Revenues (A) (₹)	22,43,34,000	19,05,75,000	11,97,90,000	53,46,99,000
	(2,640 × ₹ 84,975)	(1,650 × ₹ 1,15,500)	(550 × ₹ 2,17,800)	

Less: Cost of goods sold (B) (₹)	21,78,00,000 (2,640 × ₹ 82,500)	18,15,00,000 (1,650 × ₹ 1,10,000)	10,89,00,000 (550 × ₹ 1,98,000)	50,82,00,000
Gross Margin (A - B) (₹)	65,34,000	90,75,000	1,08,90,000	2,64,99,000
Less: Operating costs (₹)				66,23,760
Operating income (₹)				1,98,75,240
Gross Margin %				4.96%
Operating income %				3.72%

(iii) (b) Computation of cost driver rate relating to all the activity areas

Particulars	(₹)
Customer purchase order processing (₹ 17,60,000/ 5,885 orders)	299.07 per order
Line item ordering (₹ 14,04,480/ 66,110 line items)	21.24 per line item order
Store delivery (₹ 15,62,000/ 4,840 unit sold)	322.73 per unit sold
Cartons dispatched (₹ 16,72,000/ 3,39,240 dispatches)	4.93 per dispatch
Shelf-stocking at customer store (₹ 2,25,280/ 2,904 hours)	77.58 per hour

(iv) (d) Computation of operating cost

	Olay EV Max (₹)	Olay EV Ultra (₹)	Olay EV Pro (₹)	Total (₹)
Customer purchase order processing	9,21,136 (₹ 299.07 × 3,080 orders)	5,92,159 (₹ 299.07 × 1,980 orders)	2,46,733 (₹ 299.07 × 825 orders)	17,60,027
Line item ordering	6,54,192 (₹ 21.24 × 10 × 3,080 orders)	5,04,662 (₹ 21.24 × 12 × 1,980 orders)	2,45,322 (₹ 21.24 × 14 × 825 orders)	14,04,176
Store delivery	8,52,007 (₹ 322.73 × 2,640 unit sold)	5,32,505 (₹ 322.73 × 1,650 unit sold)	1,77,502 (₹ 322.73 × 550 unit sold)	15,62,013
Cartons dispatched	2,08,243 (₹ 4.93 × 16 cartons × 2,640 units)	6,50,760 (₹ 4.93 × 80 cartons × 1,650 units)	8,13,450 (₹ 4.93 × 300 cartons × 550 units)	16,72,453
Shelf stocking	20,481 (₹ 77.58 × 2,640 deliveries × 0.1 Av. hrs.)	76,804 (₹ 77.58 × 1,650 deliveries × 0.6 Av. hrs)	1,28,007 (₹ 77.58 × 550 deliveries × 3 Av. hrs)	2,25,292
Operating cost	26,56,059	23,56,890	16,11,013	66,23,962*

*Difference due to rounding off.

(v) (a) Operating Income Statement
(using the Activity based Costing system)

	Olay EV Max	Olay EV Ultra	Olay EV Pro
Revenues (₹) (A)	22,43,34,000 (2,640 × ₹ 84,975)	19,05,75,000 (1,650 × ₹ 1,15,500)	11,97,90,000 (550 × ₹ 2,17,800)
Less: Cost of goods sold (₹) (B)	21,78,00,000 (2,640 × ₹ 82,500)	18,15,00,000 (1,650 × ₹ 1,10,000)	10,89,00,000 (550 × ₹ 1,98,000)
Gross Margin (₹) (C) (A - B)	65,34,000	90,75,000	1,08,90,000
Operating cost (₹) (D) (Refer to (iv) part of the answer)	26,56,059	23,56,890	16,11,013

Operating income (₹) (E) (C-D)	38,77,941	67,18,110	92,78,987
Operating income (in %) (Operating income/ Revenue) × 100	1.73%	3.53 %	7.75 %

Summary

- (i) (d) **Order received- 3,080, 1,980 and 825 units; sold- 2,640, 1,650 and 550 units of Olay EV Max, Olay EV Ultra and Olay EV Pro respectively.**
- (ii) (b) **Gross-margin - 4.96% and Operating income - 3.72%**
- (iii) (b) **Customer purchase order processing- ₹ 299.07 per order, Line item ordering- ₹ 21.24 per line item order, Store delivery- ₹ 322.73 per unit sold, Cartons dispatched- ₹ 4.93 per dispatch and Shelf-stocking at customer store- ₹ 77.58 per hour.**
- (iv) (d) **Olay EV Max- ₹ 26,56,059, Olay EV Ultra- ₹ 23,56,890 and Olay EV Pro- ₹ 16,11,013**
- (v) (a) **Olay EV Max- 1.73%, Olay EV Ultra- 3.53% and Olay EV Pro- 7.75%**

3. (a) 306

Total production required = Budgeted sales + Increase in finished goods stock

$$= 1,000 + 100 = 1,100 \text{ units}$$

Production rate = 4 units per useful direct labour hour

$$\text{Useful hours} = \frac{1,100 \text{ units}}{4 \text{ units/hour}} = 275 \text{ hours}$$

Useful hours = 90% of paid hours:

$$\text{Paid hours} = 275 / 90\% = 305.55 = 306 \text{ hours}$$

4. (a) Production Overhead Control A/c Dr. ₹ 250

Administrative Overhead Control A/c Dr. ₹ 250

To Cost Ledger Control A/c ₹ 500

5. (c) ₹ 12,95,800

Product	Sales (units) (A)	Finished Goods (units)		Production (units) (D) = (A) + (C) - (B)
		Opening stock (B)	Closing stock (C)	
A	1,14,000	1,900	5,700	1,17,800
B	76,000	7,600	3,800	72,200
Total				1,90,000

$$\begin{aligned}\text{Apportioned to A} &= \left(\frac{1,17,800 \text{ units}}{1,90,000 \text{ units}} \times ₹ 20,90,000 \right) \\ &= ₹ 12,95,800\end{aligned}$$

6. (d) ₹ 25,00,000

Margin of Safety = 50%

P/V ratio = 40%

Fixed Cost = ₹ 5,00,000

$$\begin{aligned}\text{Break-even Sales (BES)} &= \frac{\text{Fixed Cost}}{\text{P/V ratio}} \\ &= \frac{₹ 5,00,000}{0.40}\end{aligned}$$

BES = ₹ 12,50,000

Margin of Safety = Projected sales(S) – Break Even Sales(BES)

S = BES + Margin of Safety

S = ₹ 12,50,000 + (0.50 x S)

Or, S – 0.50S = ₹ 12,50,000

Or, S = ₹ 25,00,000

7. Projected sales of product A - 10,000

Unit Requirement of Material B - 2 Kgs of B per unit of A

Yield of Material B - 80%

Hence the revised requirement of Material B - 2.5 Kgs (2/80%)

Opening stock of Product A	-	948
Product A to be produced	-	9,052
Material B Required @ 2.5 Kgs per unit of A	-	22,630 Kgs
Less: Opening stock of Material B	-	2,630 Kgs
Purchase Requirement (A) of Material B	-	20,000 Kgs
Order cost per order	-	₹ 500
Purchase price per unit	-	₹ 20
Carrying Cost (Interest + Obsolescence)	-	25% of 20 = ₹ 5

(i) **EOQ** = $\sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 20,000 \text{ units} \times ₹500}{₹5}}$ - **2,000 Kgs**

(ii) **ROQ (Quarterly Purchase policy)** - **5,000 Kgs**

Material Requirement - 22,630

Average Consumption - 62 Kgs

Max usage – Min Usage = 100Kgs

Max usage + Min Usage = 124Kgs (Formulating average usage with max & min)

Hence Minimum Usage = 12 Kgs and Maximum Usage = 112 Kgs

Lead time – 4 to 8 days

(iii) **Re-Order level** = Max Usage x Max Lead Time
= 112 Kgs x 8 Days = **896 Kgs**

(iv) **Maximum Stock** = Re-order Level + Economic order Quantity – (Min Use x Min Lead time)
= 896 + 2000 – (12x4) = **2,848 Kgs**

(If ROQ is assumed as 5,000 the answer will be different)

Maximum Stock = Re-order Level + Re-order Quantity – (Min Use x Min Lead time)

$$= 896 + 5,000 - (12 \times 4) = \mathbf{5,848 \text{ Kgs}}$$

(v) **Minimum Stock** = Re-Order level – (Average Use x Average Lead)

$$= 896 - (62 \times 6) = \mathbf{524 \text{ Kgs}}$$

(vi) **Profitability analysis on EOQ v. ROQ**

Particulars	EOQ	ROQ
Annual Requirement (A)	20,000	20,000
Quantity Ordered(B)	2,000	5,000
No. of Orders (C) = (A)/(B)	10	4
Order cost @ ₹500	5,000	2,000
Average Inventory	1,000	2,500
Carrying Cost @ ₹5	5,000	12,500
Associated Costs	10,000	14,500
Savings in EOQ		4,500

(vii) **After 5% Discount**

Particulars	EOQ	ROQ
Annual Requirement (A)	20,000	20,000
Quantity Ordered(B)	2,000	5,000
No of Orders (C) = (A)/(B)	10	4
Order cost @ ₹500	5,000	2,000
Average Inventory	1,000	2,500
Carrying Cost @ ₹5 & 4.75	5,000	11,875
Discount	0	-20000
Net Costs	10,000	-6,125
Benefit of ROQ over EOQ		16,125

8. (i) (a) Existing time rate

Weekly wages:

Normal shift	(40 hours × ₹160):	₹ 6,400
Late shift	(9 hours × ₹225)	₹ 2,025
		<u>₹ 8,425</u>

(b) Piece Rate System

15 articles are produced in 2.5 hours

Therefore, to produce 270 articles, hours required is

$$\frac{2.5 \text{ hours}}{15 \text{ articles}} \times 270 \text{ articles} = 45 \text{ hours.}$$

Cost of producing 270 articles:

$$\text{At basic time rate (45 hours} \times \text{₹160)} = \text{₹ 7,200}$$

$$\text{Add: Bonus @ 20\% on basic Piece rate} \quad \underline{\text{₹ 1,440}}$$

$$\text{Earning for the week} \quad \underline{\text{₹ 8,640}}$$

(c) Rowan Premium System

$$(i) \quad \text{Time allowed for producing 270 articles} \\ \left(\frac{2.5 \text{ hours}}{15 \text{ articles}} \times 270 \text{ articles} \times 150\% \right) = 67.5 \text{ hours}$$

$$(ii) \quad \text{Time taken to produce 270 articles} = 40.0 \text{ hours}$$

$$(iii) \quad \text{Time Saved} = 67.5 - 40 = 27.5 \text{ hours}$$

Earnings under Rowan Premium system:

$$= (\text{Time taken} \times \text{Rate per hour}) + \left(\frac{\text{Time saved}}{\text{Time allowed}} \times \text{Time taken} \times \text{Rate per hour} \right)$$

$$= (40 \text{ hours} \times \text{₹ 160}) + \left(\frac{27.5 \text{ hours}}{67.5 \text{ hours}} \times 40 \text{ hours} \times \text{₹ 160} \right)$$

$$= \text{₹ 6,400} + \text{₹ 2,607.41} = \text{₹ 9,007.41}$$

(d) Halsey Premium System

$$= (\text{Time taken} \times \text{Rate per hour}) + \left(\frac{1}{2} \times \text{Time saved} \times \text{Rate per hour}\right)$$

$$= (40 \text{ hours} \times ₹ 160) + \left(\frac{1}{2} \times 27.5 \text{ hours} \times ₹ 160\right)$$

$$= ₹ 6,400 + ₹ 2,200 = ₹ 8,600$$

(ii) Statement showing hours worked, weekly earnings, number of articles produced and cost per article

Method of Payment	Hours worked	Weekly earnings (₹)	Number of articles produced	Labour cost per article (₹)
Existing time rate	49	8,425.00	240	35.10
Straight piece rate system	40	8,640.00	270	32.00
Rowan Premium System	40	9,007.41	270	33.36
Halsey Premium System	40	8,600.00	270	31.85

9. (i) Summary of Apportionment of Overheads

(₹)

Items	Basis of Apportionment	Total Amount	Production Deptt.			Service Deptt.		
			M ₁	M ₂	A ₁	Store Service	Engineering Service	General Service
Indirect wages	Allocation given	25,02,800	9,30,400	8,26,800	3,24,400	1,64,000	1,06,800	1,50,400
Consumable supplies	Allocation given	9,04,000	2,52,000	3,64,000	84,000	56,000	84,000	64,000
Depreciation	Capital value of machine (20:15:5:2:6:2)	7,92,000	3,16,800	2,37,600	79,200	31,680	95,040	31,680
Insurance of Machine	Capital value of machine (20:15:5:2:6:2)	1,44,000	57,600	43,200	14,400	5,760	17,280	5,760
Insurance on Building	1/3 rd to M ₁ Balance area basis (-:12:16:4:5:3)	64,800	21,600	12,960	17,280	4,320	5,400	3,240
Power	HP Hr% (10:7:1:-:2:-)	1,29,600	64,800	45,360	6,480	—	12,960	—
Light	Area (10:12:16:4:5:3)	1,08,000	21,600	25,920	34,560	8,640	10,800	6,480
Rent*	Area (10:12:16:4:5:-)	2,53,500	53,940	64,720	86,300	21,580	26,960	--
Total	Total	48,98,700	17,18,740	16,20,560	6,46,620	2,91,980	3,59,240	2,61,560

*Rent to be apportioned among the departments which actually use the rented building. The notional rent is imputed cost and is not included in the calculation.

(ii) Allocation of service departments overheads

Service Deptt.	Basis of Apportionment	Production Deptt.			Service Deptt.		
		M ₁	M ₂	A ₁	Store Service	Engineering Service	General Service
Store	Ratio of consumable value (126 : 182 : 42)	1,05,120	1,51,820	35,040	(2,91,980)	—	—
Engineering service	In Machine hours Ratio of M ₁ and M ₂ (4 : 5)	1,59,660	1,99,580	—	—	(3,59,240)	—
General service	Labour hour Basis (20 : 15 : 30)	80,480	60,360	1,20,720	—	—	(2,61,560)
Production Department allocated in (i)		17,18,740	16,20,560	6,46,620			
Total		20,64,000	20,32,320	8,02,380			

(iii) Overhead Absorption rate

	M ₁	M ₂	A ₁
Total overhead allocated	20,64,000	20,32,320	8,02,380
Machine hours	40,000	50,000	–
Labour hours	–	–	3,00,000
Rate per machine hour	51.60	40.65	–
Rate per Direct labour	–	–	2.67

(iv) Statement showing overhead absorption for Product X and Y

Machine Deptt.	Absorption Rate	Product X		Product Y	
		Hours	(₹)	Hours	(₹)
M ₁	51.60	10	516.00	6	309.60
M ₂	40.65	4	162.60	14	569.10
A ₁	2.67	14	37.38	18	48.06
			715.98		926.76

10.

Ranu Ltd.

Cost Statement for the year ended 31st March, 2025

Particular	(₹)	(₹)
Raw Materials Consumed:		
Stock of Raw Materials as on 1 st Apr, 2024	50,000	
Add: Materials Purchased	2,00,000	
Add: Carriage Inward	7,150	
Less: Stock of Raw Materials as on 31 st March, 2025	(64,500)	
Raw Materials Consumed		1,92,650
Production Wages		1,20,000
Prime Cost		3,12,650
Add: Works/Factory Overheads:		
Salaries related to factory office	7,000	

Repairs to Plant and Machinery	4,450	
Rent, Rates, Taxes, Insurance etc. – Factory	8,500	
Depreciation on Plant and Machinery	6,500	
Gas and Water (Factory)	1,500	
Manager's Salary (3/4)	<u>7,500</u>	
Works or Factory Overheads		35,450
Works/Factory Cost		3,48,100
Add: Office and Administration Overheads:		
Administrative Office Salaries	12,600	
Rent, Rates, Taxes, Insurance etc. – Office	2,000	
Depreciation on Office Furniture	500	
Director's Fees	6,000	
Gas and Water (Office)	500	
Manager's Salary (1/4)	2,500	
General Expenses	<u>3,400</u>	
Office and Administration Overheads		27,500
Cost of Production/Cost of Goods Sold		3,75,600
Add: Selling and Distribution Overheads		
Carriage Outward	4,300	
Travelling Expenses	<u>2,100</u>	
Selling and Distribution Overheads		6,400
Total Cost of Sales		3,82,000
Add: Profit (Balancing Figure)		68,000
Sales		4,50,000

11. Statement of Cost and Profit
(As per Cost Records)

		(₹)
	Direct Material	22,40,000

	Direct Wages	12,00,000
	Prime Cost	34,40,000
	Factory Overhead (20% of ₹ 34,40,000)	6,88,000
		41,28,000
Less:	Closing Stock (WIP)	-96,000
	Works Cost or Cost of production (52,000 units)	40,32,000
Less:	Finished Goods (4,000 units @ ₹77.5385)	-3,10,154
	Cost of Goods Sold (48,000 units)	37,21,846
	Administrative Overhead (48,000 units @ ₹ 4.8 p.u.)	2,30,400
	Selling and Distribution Overhead (48,000 @ ₹ 6.40 p.u.)	3,07,200
	Cost of Sales	42,59,446
	Net profit (Balancing figure)	5,40,554
	Sales Revenue	48,00,000

Profit and Loss Account

(As per financial records)

Particulars	Amount (₹)	Particulars	Amount (₹)
To Direct Material consumed	20,00,000	By Sales	48,00,000
To Direct Wages	12,00,000	By Closing Work-in-process	96,000
To Factory overheads	6,40,000	By Closing Finished stock	3,20,000
To Depreciation on Plant and Machinery	1,20,000		
To Repairs & Maintenance (Factory)	48,000		
To Gross Profit c/d	<u>12,08,000</u>		
	52,16,000		52,16,000

To Administrative overheads	2,80,000	BY Gross Profit b/d	12,08,000
To Selling & distribution overheads	3,84,000	By Dividend received	40,000
To Bad debts	32,000	By Interest on deposit	8,000
To Preliminary expenses	16,000		
To Interest on Loan	60,000		
To Legal charges	4,000		
To Net profit (balancing figure)	<u>4,80,000</u>		
	12,56,000		<u>12,56,000</u>

Reconciliation Statement

Particulars	Amount t (₹)	Amount (₹)
Net profit as per Financial Profit & Loss A/c		4,80,000
Add: Administrative overheads (2,80,000 - 2,30,400)	49,600	
Selling & Distribution overheads (3,84,000 - 3,07,200)	76,800	
Bad debts	32,000	
Preliminary expenses	16,000	
Interest on loan	60,000	
Legal charges	4,000	
Factory overheads (6,40,000 + 1,20,000 + 48,000 - 6,88,000)	1,20,000	3,58,400
		8,38,400
Less: Difference in value of materials consumed	2,40,000	
Dividend received	40,000	

Interest on deposit	8,000	
Closing stock (3,20,000 - 3,10,154)	9,846	-2,97,846
Profit as per Costing Profit & Loss A/c		5,40,554

Note: Since advertisement expense is capital in nature, it is not considered in profit and loss account.

12. Statement of cost per batch and per order

No. of batch = 600 units ÷ 50 units = 12 batches

	Particulars	Cost per batch (₹)	Total Cost (₹)
	Direct Material Cost	5,000.00	60,000
	Direct Wages	500.00	6,000
	Oven set-up cost	750.00	9,000
	Add: Production Overheads (20% of Direct wages)	100.00	1,200
	Total Production cost	6,350.00	76,200
	Add: S&D and Administration overheads (10% of Total production cost)	635.00	7,620
	Total Cost	6,985.00	83,820
	Add: Profit (1/3 rd of total cost)	2,328.33	27,940
(i)	Sales price	9,313.33	1,11,760
	No. of units in batch	50 units	
(ii)	Cost per unit (₹6,985 ÷ 50 units)	139.70	
	Selling price per unit (9,313.33 ÷ 50 units)	186.27	

(iii) If the order is for 605 cakes, then selling price per cake would be as below:

Particulars	Total Cost (₹)
Direct Material Cost	60,500

Direct Wages	6,050
Oven set-up cost	9,750
Add: Production Overheads (20% of Direct wages)	1,210
Total Production cost	77,510
Add: S&D and Administration overheads (10% of Total production cost)	7,751
Total Cost	85,261
Add: Profit (1/3 rd of total cost)	28,420
Sales price	1,13,681
No. of units	605 units
Selling price per unit (₹ 1,13,681 ÷ 605 units)	187.90

13.

Process A Account

Dr.					Cr.
Particulars	Units	₹	Particulars	Units	₹
To Units brought in (₹ 100 × 10,000)	10,000	10,00,000	By Normal Loss (5% of 10,000 units @ ₹ 2/- p.u.)	500	1,000
To Sundry Materials		10,000	By Abnormal loss (Working note 1)	200	22,000
To Labour		30,000	Process B A/c	6,200	6,82,000
To Direct expenses		6,000	(Output to be transferred ₹ 110 × 6,200) (W. Note 1)		
			By Profit & Loss A/c (₹ 110 × 3,100 units) (W. Note 1)		
				3,100	3,41,000
	<u>10,000</u>	<u>10,46,000</u>		<u>10,000</u>	<u>10,46,000</u>

Process B Account

Dr.					Cr.
Particulars	Units	₹	Particulars	Units	₹
To Process A A/c	6,200	6,82,000	By Normal Loss	930	4,650
To Sundry Materials		15,000	(15% of 6,200 Units = 930 units @ ₹ 5 p.u.)		
To Labour		80,000	By Process C A/c	2,700	4,05,000
To Direct expenses		18,150	(Output to be transferred)		
To Abnormal gain (Working Note 2)	130	19,500	₹ 150 × 2,700 (Working Note 2)		
			By Profit & Loss A/c (₹ 150 × 2,700)	2,700	4,05,000
	<u>6,330</u>	<u>8,14,650</u>		<u>6,330</u>	<u>8,14,650</u>

Process C Account

Dr.					Cr.
Particulars	Units	₹	Particulars	Units	₹
To Process B A/c	2,700	4,05,000	By Normal Loss	540	5,400
To Sundry Materials		5,000	(20% of 2,700 units = 540 units @ ₹ 10/- p.u.)		
To Labour		65,000	By Abnormal Loss (Working Note 3)	60	13,800
To Direct expenses		27,200	By Profit & Loss A/c (₹ 230 × 2,100 units) (Working Note 3)	2,100	4,83,000
	<u>2,700</u>	<u>5,02,200</u>		<u>2,700</u>	<u>5,02,200</u>

Profit & Loss Account

Dr.					Cr.
Particulars	Units	₹	Particulars	Units	₹
To Process A A/c	3,100	3,41,000	By Sale	3,100	3,72,000
To Process B A/c	2,700	4,05,000	(Process A's Output		
To Process C A/c	2,100	4,83,000	@ ₹ 120/- p.m.)		
To Management Expenses		80,000	By Sale	2,700	4,45,500
To Selling Expenses		50,000	(Process B's Output		
To Abnormal Loss A/c		34,800	@ ₹ 165/- p.u.)		
(Working Note 4)			By Sale	2,100	5,25,000
			(Process C's Output		
			@ ₹ 250/- p.u.)		
			By Abnormal gain		18,850
			A/c (Working Note		
			5)		
			By Net Loss		32,450
	<u>7,900</u>	<u>13,93,800</u>		<u>7,900</u>	<u>13,93,800</u>

Working Notes

1. (i) Per unit cost of normal production under process A:

$$= \frac{\text{Normal cost of normal output}}{\text{Normal production output}}$$

$$= \frac{₹ 10,46,000 - ₹ 1,000}{9,500 \text{ units}} = ₹ 110$$

- (ii) Value of Abnormal loss under process A:

$$\text{Abnormal loss units} = \text{Normal production} - \text{Actual production}$$

$$= 9,500 - 9,300 = 200 \text{ units}$$

Value of Abnormal Loss

$$= \text{Per unit cost of normal production} \times \text{Abnormal loss units}$$

$$= ₹ 110 \times 200 = ₹ 22,000.$$

2. (i) Per unit cost of normal production under process B:
- $$= \frac{(\text{₹ } 7,95,150 - \text{₹ } 4,650)}{5,270} = \frac{\text{₹ } 7,90,500}{5,270} = \text{₹ } 150$$
- (ii) Value of Abnormal gain under process B:
- Abnormal gain units = Normal loss – Actual loss
- $$= 930 - 800 = 130 \text{ units}$$
- = Per unit cost of normal production × Abnormal gain units
- $$= \text{₹ } 150 \times 130 \text{ units} = \text{₹ } 19,500.$$
3. (i) Per unit cost of normal production under process C:
- $$= \frac{(\text{₹ } 5,02,200 - \text{₹ } 5,400)}{2,160 \text{ units}} = \frac{\text{₹ } 4,96,800}{2,160 \text{ units}} = \text{₹ } 230$$
- (ii) Value of Abnormal loss under process C:
- Abnormal loss units
- = Normal production – Actual production
- $$= 2,160 \text{ units} - 2,100 \text{ units} = 60 \text{ units}$$
- $$= \text{₹ } 230 \times 60 \text{ units} = \text{₹ } 13,800$$

4. **Abnormal Loss Account**

Dr.				Cr.			
	Units	Cost p.u. ₹	Amount ₹	Particulars	Units	Cost p.u. ₹	Amount ₹
To Process A A/c	200	110	22,000	By Sale proceeds of Process A Loss	200	2	400
To Process C A/c	60	230	13,800	By Sale proceeds of Process C loss	60	10	600
				By Profit & Loss A/c			34,800
	260		35,800		260		35,800

5. Abnormal Gain Account

Dr.							Cr.
	Units	Cost p.u.	Amount	Particulars	Units	Cost p.u.	Amount
		₹	₹			₹	₹
To Normal loss shortfall	130	5	650	By Process B	130	150	19,500
To Profit & Loss A/c			<u>18,850</u>				
			<u>19,500</u>				<u>19,500</u>

14. (i) Statement showing the apportionment of joint costs to A, B and X

Products	A	B	X	Total
Output (kg)	18,000	10,000	54,000	
Sales value at the point of split off (₹)	9,00,000 (₹ 50 x 18,000)	4,00,000 (₹ 40 x 10,000)	5,40,000 (₹ 10 x 54,000)	18,40,000
Joint cost apportionment on the basis of sales value at the point of split off (₹)	6,30,000 $\left(\frac{₹ 12,88,000}{₹ 18,40,000} \times ₹ 9,00,000 \right)$	2,80,000 $\left(\frac{₹ 12,88,000}{₹ 18,40,000} \times ₹ 4,00,000 \right)$	3,78,000 $\left(\frac{₹ 12,88,000}{₹ 18,40,000} \times ₹ 5,40,000 \right)$	12,88,000

(ii) Statement showing the cost per kg. of each product

(indicating joint cost; further processing cost and total cost separately)

Products	A	B	X
Joint costs apportioned (₹): (I)	6,30,000	2,80,000	3,78,000
Production (kg): (II)	18,000	10,000	54,000
Joint cost per kg (₹): (I ÷ II)	35	28	7

Further processing Cost per kg. (₹)	10 $\left(\frac{₹ 1,80,000}{18,000 \text{ kg}} \right)$	15 $\left(\frac{₹ 1,50,000}{10,000 \text{ kg}} \right)$	2 $\left(\frac{₹ 1,08,000}{54,000 \text{ kg}} \right)$
Total cost per kg (₹)	45	43	9

(iii) Statement showing the product wise and total profit for the period

Products	A	B	X	Total
Sales value (₹)	12,24,000	2,50,000	7,92,000	
Add: Closing stock value (₹) (Refer to Working note 2)	45,000	2,15,000	90,000	
Value of production (₹)	12,69,000	4,65,000	8,82,000	26,16,000
Apportionment of joint cost (₹)	6,30,000	2,80,000	3,78,000	
Add: Further processing cost (₹)	1,80,000	1,50,000	1,08,000	
Total cost (₹)	8,10,000	4,30,000	4,86,000	17,26,000
Profit (₹)	4,59,000	35,000	3,96,000	8,90,000

Working Notes

1.

Products	A	B	X
Sales value (₹)	12,24,000	2,50,000	7,92,000
Quantity sold (Kgs.)	17,000	5,000	44,000
Selling price ₹/kg	72 $\left(\frac{₹ 12,24,000}{17,000 \text{ kg}} \right)$	50 $\left(\frac{₹ 2,50,000}{5,000 \text{ kg}} \right)$	18 $\left(\frac{₹ 7,92,000}{44,000 \text{ kg}} \right)$

2. Valuation of closing stock:

Since the selling price per kg of products A, B and X is more than their total costs, therefore closing stock will be valued at cost.

Products	A	B	X	Total
Closing stock (kgs.)	1,000	5,000	10,000	
Cost per kg (₹)	45	43	9	
Closing stock value (₹)	45,000 (₹ 45 x 1,000 kg)	2,15,000 (₹ 43 x 5,000 kg)	90,000 (₹ 9 x 10,000 kg)	3,50,000

(iv) Calculations for processing decision

Products	A	B	X
Selling price per kg at the point of split off (₹)	50	40	10
Selling price per kg after further processing (₹) (Refer to working Note 1)	72	50	18
Incremental selling price per kg (₹)	22	10	8
Less: Further processing cost per kg (₹)	(10)	(15)	(2)
Incremental profit (loss) per kg (₹)	12	(5)	6

Product A and X has an incremental profit per unit after further processing, hence, these two products may be further processed. However, further processing of product B is not profitable hence, product B shall be sold at split off point.

15. Operating Cost Sheet

Particulars		Amount (₹)
Boiler House Cost		
Coal consumed (1,800 tonnes @ ₹ 230)	4,14,000	
Freight, loading and unloading charges (7% of coal cost)	28,980	
Oil consumed (15 tonnes @ ₹ 4,500)	67,500	

Water consumed (80,000 litres @ Re. 0.07)	5,600	
Depreciation of steam boiler ($\frac{50,00,000-2,00,000}{10 \times 12}$)	40,000	
Salaries and wages of boiler house workers:		
Skilled workers (15 @ ₹ 1,300)	19,500	
Semi-skilled workers (30 @ 1,100)	33,000	
Unskilled workers (50 @ ₹ 900)	45,000	
Less: Recovery from sale of ash (150 tonnes @ ₹ 60)	(9,000)	
Total Cost (I)		6,44,580
Generating Station Costs		
Salaries and wages of generating station staff:		
Skilled workers (60 @ ₹ 1,200)	72,000	
Semi-skilled workers (20 @ 1,000)	20,000	
Unskilled workers (30 @ ₹ 850)	25,500	
Repairs and maintenance of generating equipment	30,000	
Depreciation of generating equipment	75,000	
Insurance premium on generating plant	15,000	
Fuel handling and storage expenses	8,000	
Rent of generating station premises	12,000	
Share of administration and general expenses	65,000	
Total Cost (II)		3,22,500
Other Costs		
Electricity purchased from grid (5,000 units @ ₹ 6)	30,000	
Total Cost (III)		30,000

Total Cost of Electricity Generated and Purchased (I+II+III)		9,97,080
Units Available (W.N.)		1,81,800 units
Cost per unit		5.48 per unit

Working Note: Units Available

Particulars	Units
Total Units Generated	2,00,000
Less: Normal loss in generation	(3,000)
Net Own Units Generated	1,97,000
Add: Units purchased from grid	5,000
Total Effective Units Available	2,02,000
Less: 10% Units used by generating department	(20,200)
Units Available for Factory Operations	1,81,800

16. (i) Profit as per Draft Budget for the Next Month:

	Products				
	P		Q		Total
Budgeted Production and Sales	40,000 units		80,000 units		1,20,000 units
	Per Unit (₹)	Total (₹)	Per unit (₹)	Total (₹)	(₹)
Sales	25	10,00,000	50	40,00,000	50,00,000
Less: Total Costs	20	8,00,000	40	32,00,000	40,00,000
Profit	5	2,00,000	10	8,00,000	10,00,000

(ii) Basic Calculations:

(a)	Machine Hrs.	P: 40,000 units x 2 hrs. Q: 80,000 units x 1 hr.	1,60,000 hrs.
(b)	Fixed Overhead Rate <i>per machine hr.</i>	₹ 9,60,000 / 1,60,000 hrs.	₹ 6
(c)	Fixed Overhead <i>per unit</i>	P: 2 hrs. x ₹ 6 Q: 1 hr. x ₹ 6	₹ 12 ₹ 6
(d)	Contribution <i>per unit</i>	P: ₹ 12 + ₹ 5 Q: ₹ 6 + ₹ 10	₹ 17 ₹ 16
(e)	Product-wise Contribution <i>per machine hr.</i>	P: ₹ 17/2hrs. Q: ₹ 16/1 hr.	₹ 8.50 ₹ 16.00

Revised Product Mix to Yield Optimum Profit:

Product Q has higher contribution per machine hour. Since machine hour is a limiting factor hence maximum units of product Q should be produced. However, maximum sales potentiality of Product Q is 1,00,000 units. This will take 1,00,000 machine hour. The balance 60,000 hours should be used to produce 30,000 units of P.

The Revised Product Mix to Yield Optimum Profit will be as follows:

Product Q	(1,00,000 units × ₹ 16)	₹ 16,00,000
Product P	(30,000 units × ₹ 17)	₹ 5,10,000
Total Contribution		₹ 21,10,000
Less: Fixed Expenses		₹ 9,60,000
Profit		₹ 11,50,000

- (iii)** Product - P gives lower contribution per machine hour, hence, it will be discontinued and Product - C will be manufactured in its place. The discontinuance of Product - P will make available 60,000 machine hours to produce 40,000 units of Product - C.

The computation of selling price of Product - C can be done as follows:

Computation of Selling Price of Product- C

	(₹)
Variable Cost (40,000 units × ₹ 21)	8,40,000
Additional Fixed Cost <i>per month</i>	60,000
Return on Capital (₹ 2,00,000 × 1.25%)	2,500
Present Contribution from Product P	5,10,000
Total Sales Value <i>to be recovered</i>	14,12,500
Selling Price <i>per unit</i> of C (₹ 14,12,500/40,000 units)	35.31

17. Working Note:**Calculation of total annual production**

Particulars	(Units)
Sales in 4 quarters	2,30,625
Add: Closing balance	18,375
	2,49,000
Less: Opening balance	(11,250)
Total number of units to be produced in the next year	2,37,750

(i) Production Budget (in units)

Quarters	I (Units)	II (Units)	III (Units)	IV (Units)	Total (Units)
Sales	45,000	56,250	61,875	67,500	2,30,625
Production in current quarter (75% of the sale of current quarter)	33,750	42,188	46,406	50,625	
Production for next quarter (25% of the sale of next quarter)	14,063	15,469	16,875	18,375	
Total production	47,813	57,656	63,281	69,000	2,37,750

(ii) Raw material consumption budget in quantity

Quarters	I	II	III	IV	Total
Units to be produced in each quarter: (A)	47,813	57,656	63,281	69,000	2,37,750
Raw material consumption p.u. (kg.): (B)	4	4	4	4	
Total raw material consumption (Kg.) : (A × B)	1,91,250	2,30,625	2,53,125	2,76,000	9,51,000

(iii) Raw material purchase budget (in quantity)

Particulars	Qty. (kg.)
Raw material required for production	9,51,000
Add: Closing balance of raw material	7,500
	9,58,500
Less: Opening balance	(15,000)
Material to be purchased	9,43,500

(iv) Raw material purchase budget (in value)

Quarters	% of annual requirement	Qty. of material	Rate per kg. (₹)	Amount (₹)
(1)	(2)	(3)	(4)	(5) = (3×4)
I	25	2,35,875 (9,43,500 kg. x 25%)	12	28,30,500
II	50	4,71,750 (9,43,500 kg. x 50%)	13	61,32,750
III	25	2,35,875 (9,43,500 kg. x 25%)	14	33,02,250
Total		9,43,500		1,22,65,500

18. (a) **Difference between Cost Accounting and Management Accounting**

	Basis	Cost Accounting	Management Accounting
(i)	Nature	It records the quantitative aspect only.	It records both qualitative and quantitative aspect.
(ii)	Objective	It records the cost of producing a product and providing a service.	It provides information to management for planning and co-ordination.
(iii)	Area	It only deals with cost Ascertainment.	It is wider in scope as it includes financial accounting, budgeting, taxation, planning etc.
(iv)	Recording of data	It uses both past and present figures.	It is focused with the projection of figures for future.
(v)	Development	Its development is related to industrial revolution.	Its development is related to the need of modern business world.
(vi)	Rules and Regulation	It follows certain principles and procedures for recording costs of different products.	It does not follow any specific rules and regulations.

(b) **A number of distinct practical stages that are required in the ABC implementation are given below:**

- (1) **Staff Training:** The co-operation of the workforce is critical to the successful implementation of ABC. Staff training should be done to create an awareness on the purpose of ABC.

- (2) **Process Specification:** Informal, but structured interviews with key members of personnel will identify the different stages of the production process, the commitment of resources to each, processing times and bottlenecks.
- (3) **Activity Definition:** The activities must be defined clearly in the early stage in order to manage the problems, if any, effectively. There might be overloading of information from the new data, but the same is needed in codification.
- (4) **Activity Driver Selection:** Cost driver for each activity shall be selected.
- (5) **Assigning Cost:** A single representative activity driver can be used to assign costs from the activity pools to the cost objects.

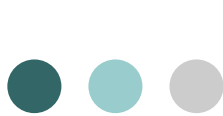
(c) **Difference between Fixed and Flexible Budgets:**

Sl. No.	Fixed Budget	Flexible Budget
1.	It operates on one level of activity and under one set of conditions. It assumes that there will be no change in the prevailing conditions, which is unrealistic.	It consists of various budgets for different levels of activity.
2.	Here as all costs like - fixed, variable and semi-variable are related to only one level of activity so variance analysis does not give useful information.	Here analysis of variance provides useful information as each cost is analysed according to its behaviour.
3.	If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture.	Flexible budgeting at different levels of activity facilitates the ascertainment of cost, fixation of selling price and tendering of quotations.

4.	Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels.	It provides a meaningful basis of comparison of the actual performance with the budgeted targets.
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- (d) **Cost unit** is a unit of product, service or time (or combination of these) in relation to which costs may be ascertained or expressed. These are usually the units of physical measurement like number, weight, area, volume, length, time and value.

Industry or Product	Cost unit(s)
Construction	Square meter, cubic meter
Transport	Passenger- kilometer, tonne-kilometer
Technology	Software license, hardware component
Oil	Barrel, tonne, litre
Gas	Cubic feet
Electricity	Kilowatt-hour (kWh)



PAPER – 5:

AUDITING AND ETHICS



QUESTIONS

PART – I: Multiple Choice Questions based on Case Scenarios

Case Scenario

Mohan & Associates were offered the statutory audit of Simi Pvt. Ltd. for the financial year 2024–25. In line with professional requirements, the firm communicated with the outgoing auditor, Veer & Co., to inquire whether there were any professional or other reasons that would preclude them from accepting the appointment. However, no response was received from Veer & Co. for the same.

During the audit, Mr. A, a partner of Mohan & Associates, relied solely on a management representation letter to support the accounting treatment of certain tax matters that were under appeal and no additional audit procedures were performed to verify the appropriateness of management's treatment of these matters in the financial statements, which may raise concerns regarding the sufficiency and appropriateness of audit evidence obtained.

As Simi Pvt. Ltd. had recently appointed a new accountant who lacked adequate knowledge of the accounting standards applicable to the company, the management requested Mr. A to assist with accounting and bookkeeping services. However, Mr. A declined the request, recognising that providing such services could impair his independence as an auditor.

Meanwhile, Mr. Raj, an investor in Simi Pvt. Ltd., placed full reliance on the audited financial statements, believing they indicated a strong financial position. He assumed that the audit guaranteed the safety of his investment, without any risk of loss.

While finalising the audit documentation, Mr. A prepared the working papers in physical form, under the belief that paper documentation was mandatory.

Based on the above facts, answer the following MCQs:

1. The previous auditors, Veer & Co. did not reply to the communication of Mohan & Associates. Which fundamental principle of professional ethics is not followed by them?
 - (a) Objectivity.
 - (b) Integrity.
 - (c) Professional behaviour.
 - (d) Professional competence and due care.
2. The auditor did not carry out any other audit procedures to justify management's treatment of the said tax matters under appeal in the financial statements. What is lacking on part of auditor in such a situation?
 - (a) Professional Skepticism.
 - (b) Objectivity.
 - (c) Integrity.
 - (d) Professional Behaviour.
3. Mr. A was requested to provide accounting & bookkeeping services to Simi Pvt. Ltd. Identify the type of threat to Independence that may be involved in acceptance of such an engagement.
 - (a) Self- interest threat.
 - (b) Self- review threat.
 - (c) Confidentiality.
 - (d) Intimidation threat.

4. Mr. Raj is confident that investment made by him is completely secure and there is no risk of any loss. Select the correct statement in this regards:
 - (a) Audited Financial statements provide absolute assurance therefore money invested by Mr. Raj is absolutely safe.
 - (b) Audited Financial statements provide reasonable assurance. It doesn't guarantee complete accuracy.
 - (c) Neither (a) nor (b) is correct.
 - (d) Both (a) and (b) are correct.
5. Mr. A was preparing the documents and audit file in physical (paper) form, believing that it is compulsory to do so. Is Mr. A's understanding, correct? Identify the correct statement regarding the form of an audit file.
 - (a) Audit file should be kept in both physical & electronic form.
 - (b) Audit file should be kept in physical form only.
 - (c) Audit file may be kept in physical or electronic form.
 - (d) Audit file should be kept in electronic form only.

General MCQs

6. While auditing Happy Pvt. Ltd., CA M reviews a large number of invoices collected by the audit team. However, noticing that only a few have third-party confirmations, CA M reminds the team that simply having more documents doesn't ensure strong audit evidence and explained that reliability or quality matters too. What CA M is trying to explain in the given situation?
 - (a) Sufficiency relates to quality; appropriateness relates to quantity.
 - (b) Internal documents are always sufficient and appropriate.
 - (c) More documents mean better audit evidence.
 - (d) Sufficiency refers to quantity; appropriateness refers to quality.

7. As per SA 560, when, after the date of the auditor's report but before the date the financial statements are issued, a fact becomes known to the auditor that, had it been known at the date of the auditor's report, may have caused the auditor to amend the auditor's report, the auditor shall:
- (a) Modify the opinion in accordance with SA 705 and provide the amended auditor's report.
 - (b) Discuss the matter with management and determine whether the financial statements need amendment.
 - (c) Notify shareholders directly to prevent reliance on the auditor's report.
 - (d) Withdraw from the engagement and disclaim an opinion.
8. Supriya has taken a loan from a bank by pledging her NSC (National Savings Certificate), which is eligible for surrender. The loan account currently shows no signs of repayment delay, and the bank confirms that an adequate margin is available in the accounts. However, the loan has technically become overdue. How should the bank classify this loan account?
- (a) The account must be classified as an NPA due to overdue status.
 - (b) The account should not be classified as an NPA since the adequate margin is available in the accounts.
 - (c) The account must be written off immediately.
 - (d) The account classification depends on the borrower's repayment history.

PART II – Descriptive Questions

Chapter 1 - Nature, Objective and Scope of Audit

9. Mini & Associates, Chartered Accountants, were appointed as the auditor of CIN Ltd., a construction company. During the audit, CA Mini, a Partner of the firm noticed the following:
- The company has several ongoing projects, but only selected project revenues have been reported.

- Several expense vouchers are either missing or are handwritten and lack proper authorisation.
- The company has changed its depreciation method from the straight-line method to the written-down value method without adequate disclosure in the financial statements.

These matters were brought to the attention of management. However, management argued that these issues fall outside the auditor's scope of responsibility. Whether contention of the management is correct?

Chapter 2 - Audit Strategy, Audit Planning and Audit Programme

10. CA Rishu is appointed as an auditor of a manufacturing company with a complex supply chain, multiple inventory locations, and recently introduced financial reporting requirements. Some article assistants and an expert assigned for inventory verification are forming part of audit team of CA Rishu. To ensure that audit risk is reduced to an acceptably low level, CA Rishu is focused on developing an effective and efficient audit plan. Explain the benefits of adequate audit planning in the audit of financial statements.

Chapter 3 - Risk Assessment and Internal Control

11. During the audit of Apex Ltd., the auditor plans to place reliance on the internal controls related to the revenue recognition process, which appear well-designed based on the preliminary assessment. However, due to materiality of revenue and the inherent risk of overstatement, the auditor concludes that more persuasive audit evidence is needed to evaluate the effectiveness of these controls. Discuss the matters the auditor may consider in determining the extent of test of controls.

Chapter 4 - Audit Evidence

12. Bold Ltd. supplies navy uniforms across the country. The company has 5 warehouses at different locations throughout the India and 4 warehouses at the borders. The major stocks are generally supplied from the borders. Bold Ltd. appointed M/s KPM & Co. to conduct its audit for the financial year 2024-25. Mr. P, partner of M/s KPM & Co., attended all the physical inventory counting conducted throughout the India but could not attend the same at borders due to some unavoidable reason.

You are required to advise M/s KPM & Co.,

- (a) How sufficient appropriate audit evidence regarding the existence and condition of inventory may be obtained?
 - (b) How is an auditor supposed to deal when attendance at physical inventory counting is impracticable?
13. CA Rimi is appointed as an auditor of ASI Pvt. Ltd. During the audit, she decided to use various audit procedures to gather sufficient and appropriate audit evidence such as:
- i. While verifying the fixed asset, she examined factory equipment and verified the presence of each item.
 - ii. To verify the company's accounts receivable, she directly sends balance confirmations to some of the customers.
 - iii. CA Rimi examined purchase invoices, contracts, and authorisation records to assess the validity of payments and the approval process.
 - iv. She independently performs the bank reconciliation that was originally carried out by the accounts department.
 - v. She also checked the accuracy of depreciation calculations made by the client.

Identify and explain the type of abovementioned audit procedure performed by CA Rimi in accordance with relevant SA.

Chapter 5 - Audit of Items of Financial Statements

14. Identify and explain the assertions that the auditor will check by performing the following audit procedures:
- (i) Employee benefit expenses recognised during the period relates to the current accounting period only.
 - (ii) Employee benefit expenses in respect of all personnel have been fully accounted for.
 - (iii) Any inventory held by the entity on behalf of another entity has not been recognised as part of inventory of the entity.

- (iv) Recorded sales represent goods which were ordered by valid customers and were despatched and invoiced in the period.

Chapter 6 - Audit Documentation

15. CA Shilpi, the engagement partner at MN Associates, is assigned the audit of following two companies:
- Zed Ltd., a small family-run business with straightforward operations, minimal internal controls, and low transaction volume.
 - Ted Ltd., a large multinational corporation with complex operations, multiple subsidiaries, high transaction volumes.

During the audit planning stage, CA Shilpi highlights that the form, content, and extent of audit documentation must be customised for each client based on specific factors. Discuss those factors on which form, content, and extent of audit documentation depends.

Chapter 7 - Completion and Review

16. During the audit of Cryst Ltd. for the financial year ended 31st March 2025, the auditor, CA Z was in the process of finalising the audit report dated 30th May 2025. The engagement partner emphasised that CA Z shall perform audit procedure designed to obtain sufficient appropriate audit evidence that all events occurring between the date of the financial statements and the date of the auditor's report, that requires adjustment of, or disclosure in, the financial statements have been identified. What audit procedures, in accordance with SA 560, should the auditor CA. Z perform based on risk assessment to identify events occurring between the date of the financial statements and the date of the auditor's report that require adjustment or disclosure?

Chapter 8 - Audit Report

17. Auditors do not always issue an unmodified opinion on financial statements. In cases where there are material misstatements or limitations in obtaining sufficient audit evidence, a modified opinion may be necessary.

Discuss the types of modified audit opinions an auditor can issue? Explain how these opinions differ based on the concepts of materiality and pervasiveness of the issue.

Chapter 9 - Special Features of Audit of Different Type of Entities

18. You are appointed as an auditor of M/s Shine & Co., a partnership firm. During your review, you observed that:

- The audit appointment was informal and not documented properly.
- The firm started a new business activity which is not covered in the partnership deed.
- Major financial decisions were made without proper records.

As an auditor, briefly explain the matters that should be specially considered by you while auditing the accounts of the partnership firm, M/s Shine & Co.

Chapter 10 - Audit of Banks

19. M/s JKL & Associates, Chartered Accountants, are the statutory auditors of M/s IBS Bank Limited for the financial year 2024-25. During the audit, they observed the following items included under interest income in the financial statements of the bank:

- An amount of ₹ 5 lakh relating to a short-term crop loan, where the instalment was overdue for one crop season.
- An amount of ₹ 7 lakh relating to an advance guaranteed equally by the Government of India and the Government of Tamil Nadu, where the instalment has been overdue for more than six months.

From the above facts and details, what should be the correct treatment of the above interest income in the bank's financial statements? State the amount that can be recognised as interest income with appropriate reasoning. Also, determine the amount to be classified as Non-Performing Asset (NPA), with reference to applicable RBI norms.

Chapter 11 - Ethics and Terms of Audit Engagements

20. CA Rohit is conducting the audit of Taste Ltd., a food production company, for the last two years. Before commencing the audit for the year, he observed that the company has undergone a major shift in its product line by expanding into pharmaceuticals. Besides this, the company is now subject to new regulatory reporting requirements. These developments were not present at the time of accepting the initial

audit engagement. CA Rohit is of the view that there is no need to issue a new audit engagement letter. Examine whether the viewpoint of CA Rohit is appropriate in accordance with the relevant Standards on Auditing.



SUGGESTED ANSWERS

PART – I: Answers to Multiple Choice Questions

MCQ No.	Answer
1.	(c)
2.	(a)
3.	(b)
4.	(b)
5.	(c)
6.	(d)
7.	(b)
8.	(b)

PART – II: Answers to Descriptive Questions

9. The following points are included in scope of audit of financial statements:

(1) Coverage of all aspects of entity

Audit of financial statements should be organised adequately to cover all aspects of the entity relevant to the financial statements being audited.

(2) Reliability and sufficiency of financial information

The auditor should be reasonably satisfied that information contained in underlying accounting records and other *source* data (like bills, vouchers, documents etc.) is reliable and sufficient basis for preparation of financial statements.

The auditor makes a judgment of reliability and sufficiency of financial information by making a study and assessment of accounting systems and internal controls and by carrying out appropriate tests, enquiries and procedures.

(3) Proper disclosure of financial information

The auditor should also decide whether relevant information is properly disclosed in the financial statements. He should also keep in mind applicable statutory requirements in this regard.

It is done by ensuring that financial statements properly summarize transactions and events recorded therein and by considering the judgments made by management in preparation of financial statements.

In view of above, the management's contention is not correct. The matters identified by CA Mini such as incomplete revenue recognition, missing or unauthorised expense vouchers, and inadequate disclosure of changes in accounting policy are well within the scope of the audit of financial statements, as they impact the reliability, completeness, and proper presentation of financial information.

- 10.** Adequate planning benefits the audit of financial statements in the several ways, including the following:
1. Helping the auditor to devote appropriate attention to important areas of the audit.
 2. Helping the auditor identify and resolve potential problems on a timely basis.
 3. Helping the auditor properly organise and manage the audit engagement so that it is performed in an effective and efficient manner.
 4. Assisting in the selection of engagement team members with appropriate levels of capabilities and competence to respond to anticipated risks, and the proper assignment of work to them.
 5. Facilitating the direction and supervision of engagement team members and the review of their work.

6. Assisting, where applicable, in coordination of work done by others such as experts

Therefore, planning an audit ensures that audit risk is reduced to an acceptable low level. When audit work is adequately and properly planned, it reduces the risk of inappropriate opinion by the auditor.

- 11.** When more persuasive audit evidence is needed regarding the effectiveness of a control, it may be appropriate to increase the extent of testing of the control as well as the degree of reliance on controls. Matters the auditor may consider in determining the extent of test of controls include the following:

- The frequency of the performance of the control by the entity during the period.
- The length of time during the audit period that the auditor is relying on the operating effectiveness of the control.
- The expected rate of deviation from a control.
- The relevance and reliability of the audit evidence to be obtained regarding the operating effectiveness of the control at the assertion level.
- The extent to which audit evidence is obtained from tests of other controls related to the assertion.

- 12. (a)** As per SA 501 "Audit Evidence- Specific Considerations for Selected Items", when inventory is material to the financial statements, the auditor shall obtain sufficient appropriate audit evidence regarding the existence and condition of inventory by:

- (1) Attendance at physical inventory counting, unless impracticable, to:
 - (i) Evaluate management's instructions and procedures for recording and controlling the results of the entity's physical inventory counting;
 - (ii) Observe the performance of management's count procedures;
 - (iii) Inspect the inventory; and

- (iv) Perform test counts.
- (2) Performing audit procedures over the entity's final inventory records to determine whether they accurately reflect actual inventory count results.

(b) Attendance at Physical Inventory Counting Not Practicable: In some cases, attendance at physical inventory counting may be impracticable. This may be due to factors such as the nature and location of the inventory. For example - where inventory is held in a location that may pose threats to the safety of the auditor.

The matter of general inconvenience to the auditor, however, is not sufficient to support a decision by the auditor that attendance is impracticable. Further, as explained in SA 200, the matter of difficulty, time, or cost involved is not in itself a valid basis for the auditor to omit an audit procedure for which there is no alternative or to be satisfied with audit evidence that is less than persuasive.

In some cases where attendance is impracticable, alternative audit procedures, for example inspection of documentation of the subsequent sale of specific inventory items acquired or purchased prior to the physical inventory counting, may provide sufficient appropriate audit evidence about the existence and condition of inventory.

In other cases, however, it may not be possible to obtain sufficient appropriate audit evidence regarding the existence and condition of inventory by performing alternative audit procedures. In such cases, SA 705 requires the auditor to modify the opinion in the auditor's report as a result of the scope limitation.

- 13.** As per SA 500, "Audit Evidence", auditor perform audit procedures to obtain sufficient appropriate audit evidence to be able to draw reasonable conclusions on which to base the auditor's opinion.
- (i) **Inspection:** Inspection involves examining records or documents, whether internal or external, in paper form, electronic form, or other media, or a physical examination of an asset.

- (ii) **External Confirmation:** An external confirmation represents audit evidence obtained by the auditor as a direct written response to the auditor from a third party (the confirming party), in paper form, or by electronic or other medium.
 - (iii) **Inspection:** Inspection involves examining records or documents, whether internal or external, in paper form, electronic form, or other media, or a physical examination of an asset. Inspection of records and documents provides audit evidence of varying degrees of reliability, depending on their nature and source and, in the case of internal records and documents, on the effectiveness of the controls over their production.
 - (iv) **Reperformance:** Repformance involves the auditor's independent execution of procedures or controls that were originally performed as part of the entity's internal control.
 - (v) **Recalculation:** Recalculation consists of checking the mathematical accuracy of documents or records. Recalculation may be performed manually or electronically.
14. (i) The auditor will check the **cut-off** assertion to ensure that whether all income and expenses are reported in the-correct accounting period. Cut-off is a separate assertion because the substantive procedures to verify it are typically different from those applied to the other components of completeness.
- (ii) The auditor will check the **completeness** assertion for the same to ensure that all transactions that were supposed to be recorded have been recognised in the financial statements. Transactions have not been omitted.
- (iii) The auditor will check **rights & obligations** assertion to ensure that the entity has the right to assets i.e. (whether the entity has ownership and legal title to assets) and the liabilities recognised in the financial statements represent all the entity's obligations to repayment as at a given date.
- (iv) The auditor will check the **occurrence** assertion for the same to ensure that transactions recognised in the financial statements have occurred and relate to the entity.

15. The form, content and extent of audit documentation depend on factors such as:

- (i) The size and complexity of the entity.
- (ii) The nature of the audit procedures to be performed.
- (iii) The identified risks of material misstatement.
- (iv) The significance of the audit evidence obtained.
- (v) The nature and extent of exceptions identified.
- (vi) The need to document a conclusion or the basis for a conclusion not readily determinable from the documentation of the work performed or audit evidence obtained.
- (vii) The audit methodology and tools used.

16. Audit procedures relating to events occurring between the date of the financial statements and the date of the auditor's report:

The auditor shall perform audit procedures designed to obtain sufficient appropriate audit evidence that all events occurring between the date of the financial statements and the date of the auditor's report that require adjustment of, or disclosure in, the financial statements have been identified. The auditor is not, however, expected to perform additional audit procedures on matters to which previously applied audit procedures have provided satisfactory conclusions.

The auditor shall perform the procedures required above so that they cover the period from the date of the financial statements to the date of the auditor's report, or as near as practicable thereto. The auditor shall take into account the auditor's risk assessment in determining the nature and extent of such audit procedures, which shall include the following: -

- (i) Obtaining an understanding of any procedures management has established to ensure that subsequent events are identified.
- (ii) Inquiring of management and, where appropriate, those charged with governance as to whether any subsequent events have occurred which might affect the financial statements.

- (iii) Reading minutes, if any, of the meetings, of the entity's owners, management and those charged with governance, that have been held after the date of the financial statements and inquiring about matters discussed at any such meetings for which minutes are not yet available.
- (iv) Reading the entity's latest subsequent interim financial statements, if any.

17. There are three types of modified opinions, namely:

- (i) A qualified opinion.
- (ii) An adverse opinion.
- (iii) A disclaimer of opinion.

Qualified Opinion:

The auditor shall express a qualified opinion when:

- (a) The auditor, having obtained sufficient appropriate audit evidence, concludes that misstatements, individually or in the aggregate, are material, but not pervasive, to the financial statements; or
- (b) The auditor is unable to obtain sufficient appropriate audit evidence on which to base the opinion, but the auditor concludes that the possible effects on the financial statements of undetected misstatements, if any, could be material but not pervasive.

Adverse Opinion: The auditor shall express an adverse opinion when the auditor, having obtained sufficient appropriate audit evidence, concludes that misstatements, individually or in the aggregate, are both material and pervasive to the financial statements.

Disclaimer of Opinion: The auditor shall disclaim an opinion when the auditor is unable to obtain sufficient appropriate audit evidence on which to base the opinion, and the auditor concludes that the possible effects on the financial statements of undetected misstatements, if any, could be both material and pervasive.

The auditor shall disclaim an opinion when, in extremely rare circumstances involving multiple uncertainties, the auditor concludes that, notwithstanding having obtained sufficient appropriate audit

evidence regarding each of the individual uncertainties, it is not possible to form an opinion on the financial statements due to the potential interaction of the uncertainties and their possible cumulative effect on the financial statements.

18. While auditing the accounts of M/s Shine & Co., a partnership firm, it is important to ensure that they have formal appointment. Further, deviation from the partnership deed, and absence of documentation for key decisions raise concerns about the validity, transparency, and legal compliance of the firm's operations. Thus, the auditor should specially consider the following matters in the audit of accounts of a partnership:
- (i) **Letter of Appointment:** Confirming that the letter of appointment, signed by a partner, duly authorised, clearly states the nature and scope of audit contemplated by the partners, specially the limitation, if any, under which the auditor shall have to function.
 - (ii) **Partnership Documents:** Studying the minute book, if any, maintained to record the policy decision taken by partners specially the minutes relating to authorisation of extraordinary and capital expenditure, raising of loans; purchase of assets, extraordinary contracts entered into and other such matters as are not of a routine nature.
 - (iii) **Objects of Partnership:** Verifying that the business in which the partnership is engaged is authorised by the partnership agreement; or by any extension or modification thereof agreed to subsequently.
 - (iv) **Books of Account:** Examining whether books of account appear to be reasonable and are considered adequate in relation to the nature of the business of the partnership.
 - (v) **Mutual Interest:** Verifying generally that the interest of no partner has suffered prejudicially by an activity engaged in by the partnership which, it was not authorised to do under the partnership deed or by any violation of a provision in the partnership agreements.

- (vi) **Provision for Taxes:** Confirming that a provision for the firm's tax payable by the partnership has been made in the accounts before arriving at the amount of profit divisible among the partners.
- (vii) **Division of Profits:** Verifying that the profits and losses have been divided among the partners in their agreed profit-sharing ratio.

19. (b) Classification of Non-Performing Asset (NPA) & Treatment of Interest Income:

- (i) **Short-Term Crop Loan:** As per RBI norms, a loan granted for short-duration crops is to be classified as NPA only if the installment remains overdue for two crop seasons.

In the given case, the installment is overdue for only one crop season, hence, the account is not classified as NPA. Therefore, the interest income of ₹ 5 lakh can be recognised in the financial statements.

- (ii) **Advance Guaranteed Equally by Government of India and Government of Tamil Nadu:** If an advance is guaranteed by the Central Government, it need not be classified as NPA until the guarantee is invoked and repudiated. Thus, Central Government guaranteed Advances, where the guarantee is not invoked/ repudiated would be classified as Standard Assets but regarded as NPA for Income Recognition purpose. The situation would be different if the advance is guaranteed by the State Government, where advance is to be considered NPA if it remains overdue for more than 90 days for both Provisioning and Income recognition purposes.

In the given case, since the guarantee is shared equally between the Central Government and the State Government (Tamil Nadu), and the installment is overdue for more than 6 months, the portion of loan guaranteed by the Central Government (50%) is not to be classified as NPA unless the guarantee is invoked and repudiated. The remaining 50%, guaranteed by the State Government, must be classified as NPA as the installment is overdue for more than 90 days.

Thus, Amount to be classified as NPA will be ₹ 3.5 lakh (i.e., 50% of ₹ 7 lakh) and amount of interest income to be recognised will be ₹ 5 lakh.

- 20.** As per SA 210, "Agreeing the terms of audit engagements", recurring audit is an audit which is performed by an auditor over years. In case of recurring audits, the auditor shall assess whether circumstances require the terms of the audit engagement to be revised and whether there is a need to remind the entity of the existing terms of the audit engagement.

The auditor may decide not to send a new audit engagement letter or other written agreement each period. However, the following factors may make it appropriate to revise the terms of the audit engagement or to remind the entity of existing terms:

- (i) Any indication that the entity misunderstands the objective and scope of the audit.
- (ii) Any revised or special terms of the audit engagement.
- (iii) A recent change of senior management.
- (iv) A significant change in ownership.
- (v) A significant change in nature or size of the entity's business.
- (vi) A change in legal or regulatory requirements.
- (vii) A change in the financial reporting framework adopted in the preparation of the financial statements.
- (viii) A change in other reporting requirements.

In the given case, Taste Ltd., a food production company, has undergone a major shift in its product line by expanding into Pharmaceuticals and the company is also subject to new regulatory reporting requirements. In view of the abovementioned factors, it is appropriate to revise the terms of the audit engagement in accordance with SA 210. Thus, the viewpoint of CA Rohit regarding no need for issuance of a new engagement letter is not correct, CA Rohit is required to send the revise audit engagement letter.



PAPER – 6:

FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT

6A: FINANCIAL MANAGEMENT



QUESTIONS

Case Scenarios

1. Mint Technologies, a startup in the IT infrastructure space, is planning to enter the computer networking market with a specialized offering—VPN connectivity solutions for enterprises with distributed office networks. The company recently won a significant tender from a major national bank to set up secure VPN connections across 100 branches. The leadership team is excited but cautious, as this move requires significant upfront investment and ongoing operational capability.

To evaluate the financial viability of this project, you have been hired as a consultant.

- They have forecasted their numbers for 5 years and they have assumed that they will grow at industry average (3%) afterwards.
- Mint will invest all the money for CAPEX in the infrastructure and equipment. Mint is planning to issue 50Mn shares in lieu of the amount.
- Mint will have to keep upgrading the infrastructure and equipment to cover different offices of various clients.
- Mint expects an initial investment of around ₹ 150 Mn in network access as an initial setup cost for connecting different offices. Mint

needs to invest additional ₹10 Mn every year starting from beginning and is expected to grow 10% every year.

- The equipment investment varies with number of branches/offices. This varies with time and currently it is ₹ 0.1 Mn per office.
- Initially, Mint has won a tender of 100 branches of a bank and expecting it to grow at 30% for next 5 years.
- Mint is expecting to have a maintenance cost of 10% for equipment and 15% for network.
- To handle all this, current manpower cost is ₹ 1 Mn
- Mint has entered into an agreement with local authority and has agreed to share 5% of the revenue with the same.
- Mint is expecting to generate revenue of ₹ 0.5 Mn per office and to remain competitive in the market, it is not going to increase with inflation.
- Capital expenditure and operating expenses will grow 10% every year.
- Tax slab in the country is 30% and depreciation of the equipment and network is assumed to be 10%. Discounting rate is 20%.
- Assume all the expenditure including initial setup cost from year 1.

Based on the above information, you are required to answer following 5 MCQs:

- (i) What is the CFAT for year 1?
- (a) -15,33,50,000
 - (b) 1,00,17,000
 - (c) 1,75,73,810
 - (d) 2,74,29,367
- (ii) What is the CFAT for year 5?
- (a) -15,33,50,000
 - (b) 1,00,17,000

- (c) 4,02,25,268
(d) 2,74,29,367
- (iii) Calculate the terminal value
(a) ₹ 24,37,17,801
(b) ₹ 9,79,74,556
(c) ₹ 6,38,54,064
(d) ₹ 21,32,20,955
- (iv) What is the total present value of the mint technologies?
(a) ₹ 1,89,77,337
(b) ₹ 1,32,20,955
(c) ₹ 1,67,06,548
(d) ₹ 89,97,791
- (v) Calculate the IRR for the company
(a) 22.60%
(b) 15.39%
(c) 20.25%
(d) 24.68%

Ratio Analysis and Leverages

2. A manufacturing company which is presently growing at a good rate has a Financial Leverage of 3. Its present borrowings are as follows:

12% Term Loan ₹ 60,00,000

Bank borrowings@10% ₹ 40,00,000

Public Deposits@8% ₹ 20,00,000

The Interest Coverage Ratio will be

- (a) 1.0
(b) 1.5

- (c) 2.0
- (d) 2.5

Cost of Capital

3. Consider the below mentioned statements:
1. A debt-equity ratio of 2:1 indicates that for every 1 unit of equity, the company can raise 2 units of debt.
 2. The cost of floating a debt is greater than the cost of floating an equity issue.

State True or False:

- (a) 1-True, 2-True
- (b) 1-False, 2-True
- (c) 1-False, 2-False
- (d) 1-True, 2-False

Division B: Descriptive Questions

Financial Analysis & Planning – Ratio Analysis

4. Jamunapati Limited has furnished the following ratios and information relating to the year ended 31st March, 2024:

Sales	₹ 70,00,000
Return on net worth	25%
Rate of income tax	30%
Share capital to reserves	7:3
Current ratio	2
Net profit to sales	7%
Inventory turnover	10
Cost of goods sold	₹ 24,00,000
Interest on 15% debentures	₹ 1,05,000
Receivables	₹ 3,00,000
Payables	₹ 3,00,000

You are required to:

- (a) CALCULATE the operating expenses for the year ended 31st March, 2024.
- (b) PREPARE a Balance Sheet as on 31st March, 2024 in the following format:

Balance Sheet as on 31st March, 2024

Liabilities	₹	Assets	₹
Share Capital		Fixed Assets	
Reserve and Surplus		Current Assets	
15% Debentures		Stock	
Payables		Receivables	
		Cash	

Financing Decision - Cost of Capital

5. Lavanya Limited wishes to raise additional finance of ₹ 20 lakhs for meeting its investment plans. It has ₹ 4,20,000 in the form of retained earnings available for investment purposes. Further details are as following:

(1)	Debt / Equity mix	3:7
(2)	Cost of debt:	
	Upto ₹ 3,60,000	8% (before tax)
	Beyond ₹ 3,60,000	12% (before tax)
(3)	Earnings per share	₹ 5
(4)	Dividend pay out	40% of earnings
(5)	Retained Earnings	60%
(6)	Rate of Return on Retained Earnings	10%
(7)	Current market price per share	₹ 53
(8)	Tax rate	30%

You are required to:

- (a) DETERMINE the pattern for raising the additional finance.

- (b) DETERMINE the post-tax average cost of additional debt.
- (c) DETERMINE the cost of retained earnings and cost of equity.
- (d) COMPUTE the overall weighted average after tax cost of additional finance.

Financing Decision – Capital Structure

6. ABC Ltd. is planning to raise ₹50,00,000 for a major expansion project. The firm is evaluating three financing options:

(i) Equity Financing Only

Issuing new shares at ₹10 each (Issue price: ₹10, but flotation cost per share: ₹0.50).

Existing equity shares: 10,00,000.

Market price per share: ₹20.

(ii) Debt Financing Only

Borrow ₹50,00,000 at 12% interest.

Flotation cost on debt: 2% of the face value.

The lender imposes a debt covenant limiting the interest coverage ratio (EBIT/Interest) to a minimum of 2.5.

(iii) Mix of Equity and Debt Financing

Raise ₹25,00,000 through equity (floatation cost: ₹0.50/share at ₹ 10 issue price).

Raise ₹25,00,000 through debt at 12% interest (floatation cost: 2%).

Additional Information

- (i) Project EBIT: ₹15,00,000 annually.
- (ii) Corporate tax rate: 30%.
- (iii) Existing shares: 10,00,000.
- (iv) Risk-free rate: 6%, Market return: 14%, Equity beta: 1.2.

From the above information:

1. CALCULATE the net proceeds from each financing method (after floatation costs) and determine the number of new shares issued in Option (i) and Option (iii).
2. For debt options, CHECK if the interest coverage ratio complies with the covenant (minimum 2.5).
3. COMPUTE EPS under each option.
4. COMPUTE the WACC under each option, considering the impact of floatation costs on capital raised.

ADVISE which financing option is best from both an EPS and WACC perspective.

Financing Decision – Leverages

7. X Limited and Y Limited are two mid-sized companies operating in the same competitive industry. Both companies have recently undergone a financial performance review to assess their operational efficiency, cost structure, and overall financial risk. You, as a financial analyst, have been provided with selective financial indicators and are required to draw insights and comparisons based on leverage analysis and income statement reconstruction.

The management of X Limited has disclosed that the company is currently operating with a Margin of Safety (M/S) ratio of 0.1667. In contrast, Y Limited has a Margin of Safety that is twice as high as that of X Limited.

Both companies maintain a Financial Leverage of 3. Their variable cost ratios are 60% for X Limited and 50% for Y Limited.

In terms of financing costs, X Limited incurs an annual interest expense of ₹30,000. Y Limited, however, incurs an interest cost that is 300% higher than X Limited. Both companies are subject to a corporate tax rate of 30%, which affects their net profitability after interest and taxes.

You are required to PREPARE Income statement for both the companies and IDENTIFY the company which is better placed with reasons based on leverages.

Dividend Decision

8. In the month of April of the current Financial Year, shares of PQR Ltd. were sold for ₹ 1,570 per share. A long-term earnings growth rate of 8% is anticipated. PQR Ltd. paid dividend of ₹ 25 per share.
- CALCULATE rate of return an investor can expect to earn assuming that dividends are expected to grow along with earnings at 8% per year in perpetuity.
 - It is expected that PQR Ltd. will earn about 10% on retained earnings and shall retain 60% of earnings. In this case, STATE whether, there would be any change in growth rate and cost of Equity?

Management of Working Capital

9. A firm has a total sale of ₹ 200 lakhs of which 80% is on credit. It is offering credit terms of 2/40, net 120. Of the total, 50% of customers avail of discount and the balance pay in 120 days. Past experience indicates that bad debt losses are around 1.5% of credit sales. The firm spends about ₹ 2,40,000 per annum to administer its credit sales. These are avoidable as a factor is prepared to buy the firm's receivables. He will charge 2% commission. He will pay advance against receivables to the firm at an interest rate of 18% after withholding 10% as reserve.
- DETERMINE the effective cost of factoring? Consider year as 360 days.
 - If bank finance for working capital is available at 12% interest, ADVISE, should the firm avail of factoring service

Miscellaneous

10. (a) Contemplate the list of features given below and IDENTIFY each one of them with the most relevant sources of funds:
- It is the most expensive source of funds.
 - It entails a high degree of risk since they have to be repaid as per the terms of agreement.

- (iii) It supports businesses in their routine activities.
 - (iv) Business enterprise has options to raise capital from International markets also.
 - (v) This source of finance sometimes is the last option for startups which doesn't qualify for bank funding
- (b) Trade credit and bank overdraft are two commonly used short-term financing sources but each has distinct features. On the light of the statement SHOW the difference between trade credit and bank overdraft.
- (c) ABC Ltd. is a manufacturing company experiencing rapid sales growth. To meet the increased demand, the company has started maintaining higher inventory levels and offering more generous credit terms to customers. However, its cash reserves are depleting, and it is facing difficulties in paying suppliers on time. As a financial analyst, apply your understanding of the scope of working capital management to ANALYZE the trade-offs the company is making between different components of working capital (inventory, receivables, advances, payables, and cash).



SUGGESTED ANSWERS/HINTS

Division A: Case Scenario

Q. No.		Hints
1.	(i)	(a) -15,33,50,000
	(ii)	(c) 4,02,25,268
	(iii)	(a) ₹ 24,37,17,801
	(iv)	(c) ₹ 1,67,06,548
	(v)	(d) 24.68%

Calculation of CFAT

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Offices (A)	100	130	169	219*	284*
Revenue Per office (B)	5,00,000	5,00,000	5,00,000	5,00,000	5,00,000
Total Revenue (C) (A x B)	5,00,00,000	6,50,00,000	8,45,00,000	10,95,00,000	14,20,00,000
Operating Cost					
Share of Local Authority	75,00,000	97,50,000	1,26,75,000	1,64,25,000	2,13,00,000
Manpower Cost	10,00,000	14,30,000	20,44,900	29,14,890	41,58,044
Maintenance Cost for Equipment	10,00,000	13,30,000	18,01,900	24,67,400	34,19,065
Maintenance Cost for Network	2,40,00,000	2,56,50,000	2,74,65,000	2,94,61,500	3,16,57,650
Total Operating Cost (D)	3,35,00,000	3,81,60,000	4,39,86,800	5,12,68,790	6,05,34,759
EBITDA (E) (C-D)	1,65,00,000	2,68,40,000	4,05,13,200	5,82,31,210	8,14,65,241
Less: Depreciation	1,70,00,000	1,84,30,000	2,01,11,900	2,21,08,400	2,45,24,165
EBIT (F)	-5,00,000	84,10,000	2,04,01,300	3,61,22,810	5,69,41,076
Less: Taxes	-1,50,000	25,23,000	61,20,390	1,08,36,843	1,70,82,323
PAT (G)	-3,50,000	58,87,000	1,42,80,910	2,52,85,967	3,98,58,753
Add: Depreciation	1,70,00,000	1,84,30,000	2,01,11,900	2,21,08,400	2,45,24,165
CFAT (H)	1,66,50,000	2,43,17,000	3,43,92,810	4,73,94,367	6,43,82,918
Less: Capex	17,00,00,000	1,43,00,000	1,68,19,000	1,99,65,000	2,41,57,650
Net CFAT (I)	-15,33,50,000	1,00,17,000	1,75,73,810	2,74,29,367	4,02,25,268

***Note:** Since offices cannot be represented in fractions, the number should be rounded down to the nearest whole number.

Working Note

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Cost					
Manpower Cost (With Inflation)	10,00,000	11,00,000	12,10,000	13,31,000	14,64,100
Manpower Cost per office (With Inflation)	10,000	11,000	12,100	13,310	14,641
CAPEX					
Additional Branches	100	30	39	50	65
Network CAPEX w/o inflation	16,00,00,000	1,00,00,000	1,00,00,000	1,00,00,000	1,00,00,000
Network CAPEX With inflation	16,00,00,000	1,10,00,000	1,21,00,000	1,33,10,000	1,46,41,000
Additional Equipment CAPEX/Branch (with inflation)	1,00,000	1,10,000	1,21,000	1,33,100	1,46,410
CAPEX Schedule					
Network Capex	16,00,00,000	1,10,00,000	1,21,00,000	1,33,10,000	1,46,41,000
Cumulative Capex in Network	16,00,00,000	17,10,00,000	18,31,00,000	19,64,10,000	21,10,51,000
Additional Equipment CAPEX (in the Year)	1,00,00,000	33,00,000	47,19,000	66,55,000	95,16,650
Cumulative Additional Equipment CAPEX	1,00,00,000	1,33,00,000	1,80,19,000	2,46,74,000	3,41,90,650

Terminal Value (TV) using Gordon Growth Model (GGM)

$$\text{Terminal Value} = \frac{\text{Terminal Year Cash Flow} \times (1 + g)}{K_e - g}$$

$$= \frac{4,02,25,268 (1 + 0.03)}{20\% - 3\%} = ₹ 24,37,17,801$$

Calculation of Total PV

Year	CF	PVAF@20%	PV
1	-15,33,50,000	0.833	-12,77,86,555
2	1,00,17,000	0.694	69,51,798
3	1,75,73,810	0.579	1,01,75,236
4	2,74,29,367	0.482	1,32,20,955
5	4,02,25,268	0.402	1,61,70,558
5	24,37,17,801	0.402	9,79,74,556
Total PV			1,67,06,548

Calculation of IRR

Year	Cash Flows	PVAF@20%	PV	PVAF@25%	PV
1	-15,33,50,000	0.8333	-12,77,86,555	0.800	-12,26,80,000
2	1,00,17,000	0.694	69,51,798	0.640	64,10,880
3	1,75,73,810	0.579	1,01,75,236	0.512	89,97,791
4	2,74,29,367	0.482	1,32,20,955	0.410	1,12,46,040
5	4,02,25,268	0.402	1,61,70,558	0.328	1,31,93,888
5	24,37,17,801	0.402	9,79,74,556	0.262	6,38,54,064
			1,67,06,548		-1,89,77,337

$$\text{IRR} = L + \frac{\text{NPV}_L}{\text{NPV}_L - \text{NPV}_H} (H - L)$$

H = Higher rate = 25%

L = Lower rate = 20%

$$\begin{aligned} \text{IRR} &= 20 + \frac{1,67,06,548}{1,67,06,548 - (-1,89,77,337)} (25 - 20) \\ &= 20 + 4.68 = 24.68\% \end{aligned}$$

2. (b) Working Notes

Calculation of Interest

12% Term Loan	₹ 7,20,000
Bank borrowings@10%	₹ 4,00,000
Public Deposits@8%	₹ 1,60,000
Total Interest	₹ 12,80,000
Financial Leverage	= EBIT/EBIT – Interest
3	= EBIT/EBIT – 12,80,000
Or EBIT	= 19,20,000
So, Interest Coverage Ratio	= EBIT/Interest
	= 19,20,000/12,80,000
	= 1.5

3. (d) 1-True, 2-False

4. (a) Calculation of Operating Expenses for the year ended 31st March, 2024

	(₹)
Net Profit [@ 7% of Sales]	4,90,000
Add: Income Tax (@ 30% of PBT)	2,10,000
Profit Before Tax (PBT)	7,00,000
Add: Debenture Interest	1,05,000
Profit before interest and tax (PBIT)	<u>8,05,000</u>
Now, Sales (given)	70,00,000
Less: Cost of goods sold	24,00,000
Gross Profit	46,00,000

Less: PBIT	8,05,000
Operating Expenses	37,95,000

(b) Balance Sheet as on 31st March, 2024

Liabilities	₹	Assets	₹
Share Capital	13,72,000	Fixed Assets	23,60,000
Reserve and Surplus	5,88,000	Current Assets:	
15% Debentures	70,00,000	Stock	2,40,000
Payables	3,00,000	Receivables	3,00,000
		Cash	<u>60,000</u>
	29,60,000		29,60,000

Working Notes:

(i) Share Capital and Reserves and Surplus

The return on net worth is 25%. Therefore, the profit after tax of ₹ 4,90,000 should be equivalent to 25% of the net worth.

$$\text{Net worth} \times \frac{25}{100} = ₹ 4,90,000$$

$$\therefore \text{Net worth} = \frac{₹ 4,90,000 \times 100}{25} = ₹ 19,60,000$$

The ratio of share capital to reserves is 7:3

$$\text{Share Capital} = 19,60,000 \times \frac{7}{10} = ₹ 13,72,000$$

$$\text{Reserves and Surplus} = 19,60,000 \times \frac{3}{10} = ₹ 5,88,000$$

(ii) Debentures

Interest on Debentures @ 15% = ₹ 1,05,000

$$\therefore \text{Debentures} = \frac{1,05,000 \times 100}{15} = ₹ 7,00,000$$

(iii) Current Assets

$$\begin{aligned}\text{Current Ratio} &= 2 \\ \text{Payables} &= ₹ 3,00,000 \\ \therefore \text{Current Assets} &= 2 \text{ Current Liabilities} \\ &= 2 \times 3,00,000 \\ &= ₹ 6,00,000\end{aligned}$$

It is assumed that current liabilities include payables only.

(iv) Fixed Assets

	₹
Share capital	13,72,000
Reserves and Surplus	5,88,000
Debentures	7,00,000
Payables	3,00,000
Total Liabilities	29,60,000
Less: Current Assets	6,00,000
Fixed Assets	23,60,000

(v) Composition of Current Assets

$$\begin{aligned}\text{Inventory Turnover} &= 10 \\ \frac{\text{Cost of goods sold}}{\text{Closing stock}} &= 10 \\ \text{Closing stock} &= \frac{₹ 24,00,000}{10} = ₹ 2,40,000\end{aligned}$$

Composition	₹
Stock	2,40,000
Receivables	3,00,000
Cash (balancing figure)	60,000
Total Current Assets	6,00,000

5. (a) **Pattern for raising the additional finance:**

Equity 70% of ₹ 20,00,000 = ₹14,00,000

Debt 30% of ₹ 20,00,000 = ₹ 6,00,000

The capital structure after raising additional finance:

	(₹)
Shareholders' funds	
Equity Capital (₹ 14,00,000 – ₹ 4,20,000)	9,80,000
Retained earnings	4,20,000
Debt (Interest at 8% p.a.)	3,60,000
(Interest at 12% p.a.) (₹ 6,00,000 – ₹ 3,60,000)	2,40,000
Total Funds	20,00,000

(b) **Determination of post-tax average cost of additional debt:**

$$K_d = I (1 - t)$$

Where,

I = Interest Rate

t = Corporate tax-rate

On ₹ 3,60,000 = 8% (1 – 0.3) = 5.6% or 0.056

On ₹ 2,40,000 = 12% (1 – 0.3) = 8.4% or 0.084

Average Cost of Debt

$$= \frac{(\text{₹ } 3,60,000 \times 0.056) + (\text{₹ } 2,40,000 \times 0.084)}{\text{₹ } 6,00,000} \times 100 = 6.72\%$$

(c) **Determination of cost of retained earnings and cost of equity by applying Dividend growth model:**

$$K_e \text{ or } K_r = \frac{D_1}{P_0} + g = \frac{D_0(1+g)}{P_0} + g$$

Where,

$$D_0 = \text{Dividend paid} = 40\% \text{ of EPS} = 40\% \times ₹ 5 = ₹ 2$$

$$g = \text{Growth rate} = \text{Retained Earnings} \times \text{Rate of Return} \\ = 0.6 \times 0.10 = 0.06 \text{ or } 6\%$$

$$P_0 = \text{Current market price per share} = ₹ 53$$

$$K_e \text{ or } K_r = \frac{2(1+0.6)}{53} = \frac{2.12}{53} + 0.06 = 0.04 + 0.06 = 0.10 \text{ or } 10\%$$

(d) Computation of overall weighted average after tax cost of additional finance:

Particulars	Amount (₹)	Weights	Cost of funds	Weighted Cost (%)
Equity (including retained earnings)	14,00,000	0.70	10%	7
Debt	6,00,000	0.30	6.72%	2.016
WACC	20,00,000			9.016

6. (i) Calculation of Net Proceeds after Floatation Cost and Number of New Shares in Option (i) and (iii)

Equity Option

$$\text{Net proceeds per share} = ₹ 10 - ₹ 0.50 = ₹ 9.50$$

$$\text{Number of shares issued} = ₹ 50,00,000 / ₹ 9.50 = \mathbf{5,26,316 \text{ shares}}$$

Debt Option

$$\text{Flotation cost} = 2\% \text{ of } ₹ 50,00,000 = ₹ 1,00,000$$

$$\text{Net proceeds} = ₹ 50,00,000 - ₹ 1,00,000 = \mathbf{₹ 49,00,000}$$

But project requires ₹ 50,00,000.

$$\text{So gross borrowing} = ₹ 50,00,000 / (1 - 0.02) = \mathbf{₹ 51,02,041}$$

$$\text{Interest} = 12\% \times ₹ 51,02,041 = \mathbf{₹ 6,12,245}$$

Mix Option (₹25 lakh Equity, ₹25 lakh Debt)**Equity**

Net proceeds/share = ₹ 9.50

Shares issued = ₹ 25,00,000 / ₹ 9.50 = **2,63,158 shares**

Debt

Net debt proceeds = ₹ 25,00,000.

Gross borrowing = ₹25,00,000 / (1 – 0.02) = ₹25,51,020

Interest = 12% × ₹25,51,020 = **₹3,06,122**

(ii) Calculation of Interest Coverage Ratio (ICR)

ICR = EBIT / Interest

Debt Option:

EBIT = ₹ 15,00,000

Interest = ₹ 6,12,245

ICR = ₹ 15,00,000 / ₹ 6,12,245 ≈ **2.45 (Fails covenant)**

Mix of Equity and Debt Option

Interest = ₹ 3,06,122

ICR = ₹ 15,00,000 / ₹ 3,06,122 ≈ **4.90 (Passes covenant)**

(iii) Calculation of Earnings Per Share (EPS)

$$\text{EPS} = \frac{(\text{EBIT} - \text{Interest}) (1 - \text{Tax})}{\text{Total Shares}}$$

Equity Option

Interest = ₹ 0

Net Income = ₹ 15,00,000 × (1 – 0.30) = ₹ 10,50,000

Total Shares = 10,00,000 + 5,26,316 = **15,26,316**

EPS = ₹ 10,50,000 / 15,26,316 = **₹ 0.688**

Debt Option (Fails covenant)

Interest = ₹ 6,12,245

$$\text{Net Income} = (\text{₹ } 15,00,000 - \text{₹ } 6,12,245) \times (1 - 0.30)$$

$$= \text{₹ } 6,21,428.5$$

$$\text{Total Shares} = 10,00,000$$

$$\text{EPS} = \text{₹ } 6,21,428.5 / 10,00,000$$

$$= \text{₹ } 0.621 \text{ (But violates ICR)}$$

Mix Option

$$\text{Interest} = \text{₹ } 3,06,122$$

$$\text{Net Income} = (\text{₹ } 15,00,000 - \text{₹ } 3,06,122) \times 0.70 = \text{₹ } 8,35,714.6$$

$$\text{Total Shares} = 10,00,000 + 2,63,158 = \mathbf{12,63,158}$$

$$\text{EPS} = \text{₹ } 8,35,714.6 / 12,63,158 \approx \text{₹ } 0.662$$

(iv) Calculation of WACC

Cost of Equity (Using CAPM)

$$\text{Cost of Equity} = R_f + \beta(R_m - R_f)$$

$$= 6\% + 1.2 \times (14\% - 6\%) = 6\% + 9.6\% = 15.6\%$$

$$\text{Now, WACC} = (EV \times K_e) + (DV \times K_d \times (1 - t))$$

Equity Option

$$E = \text{₹ } 50,00,000$$

$$D = \text{₹ } 0$$

$$\text{WACC} = 15.6\%$$

Debt Option

$$E = \text{₹ } 0$$

$$D = \text{₹ } 51,02,041$$

$$K_d = 12\%$$

$$\text{After-tax cost of debt} = 12\% \times (1 - 0.30) = 8.4\%$$

$$\text{WACC} = 8.4\% \text{ (Lowest WACC but fails covenant)}$$

Mix Option

$$E = ₹ 25,00,000, D = ₹ 25,51,020$$

$$\text{Total Value} = ₹ 50,51,020$$

$$K_e = 15.6\%, K_d (\text{after tax}) = 8.4\%$$

$$\text{WACC} = (\text{Weight of } K_e \times \text{Cost of Equity}) + (\text{Weight of } K_d \times \text{Cost of Debt})$$

$$= (0.495 \times 0.156) + (0.505 \times 0.084)$$

$$= 0.0772 + 0.0424 = 0.1196 \text{ or } 11.96\%$$

Conclusion & Recommendation

Option	EPS	WACC	Covenant Compliant
Equity	₹ 0.688	15.6%	Not Applicable
Debt	₹ 0.621	8.4%	No (ICR < 2.5)
Mix	₹ 0.662	11.96%	Yes

Hence, the recommended option is Mixed Financing as it complies with the debt covenant, has higher EPS than Debt Option, and lower WACC than Equity Option.

7. Company X

$$(i) \quad \text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT i.e EBIT} - \text{Interest}}$$

$$\text{So, } 3 = \frac{\text{EBIT}}{\text{EBIT} - ₹ 30,000}$$

$$\text{Or, } 3 (\text{EBIT} - 30,000) = \text{EBIT}$$

$$\text{Or, } 2 \text{ EBIT} = 90,000$$

$$\text{Or, } \text{EBIT} = 45,000$$

$$(ii) \quad \text{Margin of safety} = 0.1667$$

$$\text{Operating Leverage} = 1/\text{Margin of safety}$$

$$= 1/0.1667 = 6$$

$$\begin{aligned}
 &= \frac{\text{Contribution}}{\text{EBIT}} \\
 \text{Or, } 6 &= \frac{\text{Contribution}}{\text{₹ 45,000}} \\
 \text{Or, Contribution} &= \text{₹ 2, 70,000} \\
 \text{Sales} &= \frac{\text{contribution}}{\text{P/V Ratio}(1 - \text{variable cost ratio})} \\
 &= \frac{\text{₹ 2,70,000}}{40\%} = \text{₹ 6,75,000} \\
 \text{(iii) Fixed Cost} &= \text{Contribution} - \text{EBIT} \\
 &= \text{₹ 2,70,000} - \text{₹ 45,000} \\
 \text{Or, Fixed cost} &= \text{₹ 2,25,000}
 \end{aligned}$$

Company Y

$$\begin{aligned}
 \text{(i) Financial Leverage} &= \frac{\text{EBIT}}{\text{EBT i.e EBIT} - \text{Interest}} \\
 \text{So, } 3 &= \frac{\text{EBIT}}{\text{EBIT} - \text{₹ 1,20,000}} \\
 \text{Or, } 3 (\text{EBIT} - \text{₹ 1,20,000}) &= \text{EBIT} \\
 \text{Or, } 3 \text{ EBIT} - \text{₹ 3,60,000} &= \text{EBIT} \\
 \text{Or, EBIT} &= \text{₹ 1,80,000} \\
 \text{(ii) Margin of safety} &= 0.1667 \times 2 = 0.3333 \\
 \text{Operating Leverage} &= 1/\text{Margin of safety} \\
 &= 1/0.3333 = 3 \\
 &= \frac{\text{Contribution}}{\text{EBIT}} \\
 \text{Or, } 3 &= \frac{\text{Contribution}}{\text{₹ 1,80,000}} \\
 \text{Or, Contribution} &= \text{₹ 5,40,000}
 \end{aligned}$$

$$\begin{aligned}
 \text{Sales} &= \frac{\text{Contribution}}{\text{P/V Ratio (1 - variable cost ratio)}} \\
 &= \frac{\text{₹ } 5,40,000}{50\%} = \text{₹ } 10,80,000 \\
 \text{(iii) Fixed Cost} &= \text{Contribution} - \text{EBIT} \\
 &= \text{₹ } 5,40,000 - \text{₹ } 1,80,000 \\
 \text{Or, Fixed cost} &= \text{₹ } 3,60,000 \\
 \text{(iv) Interest} &= \text{₹ } 30,000 + \text{₹ } 30,000 \times 300\% = \text{₹ } 1,20,000
 \end{aligned}$$

Income Statements of X Ltd and Y Ltd

	X Ltd (₹)	Y Ltd (₹)
Sales	6,75,000	10,80,000
Less: Variable cost	4,05,000	5,40,000
Contribution	2,70,000	5,40,000
Less: Fixed Cost	2,25,000	3,60,000
Earnings before interest and tax (EBIT)	45,000	1,80,000
Less: Interest	30,000	1,20,000
Earnings before tax (EBT)	15,000	60,000
Less: Tax @ 30%	4,500	18,000
Earnings after tax (EAT)	10,500	42,000

Comment based on Leverage

Comment based on leverage – Company Y is better than company X of the following reasons:

- Capacity of Company Y to meet interest liability is same that of companies X (from EBIT/Interest ratio)

$$[X = \frac{\text{₹ } 45,000}{\text{₹ } 30,000} = 1.5, Y = \frac{\text{₹ } 1,80,000}{\text{₹ } 1,20,000} = 1.5]$$
- However, Company Y has lesser financial risk as the total risk (business and financial) of company Y is lower (combined leverage of Company X is 18 and Company Y is 9).

8. (i) According to Dividend Discount Model approach, the firm's expected or required return on equity is computed as follows:

$$K_e = \frac{D_1}{P_0} + g$$

$$K_e = \frac{25 (1 + 0.08)}{1,570} + 0.08$$

$$= 0.0172 + 0.08 = 0.0972 \text{ or } 9.72\%$$

- (ii) With rate of return on retained earnings (r) is 10% and retention ratio (b) is 60%, new growth rate will be as follows:

$$g = br = 0.10 \times 0.60 = 0.06$$

Accordingly, dividend will also get changed and to calculate this, first we shall calculate previous retention ratio (b_1) and then EPS assuming that rate of return on retained earnings (r) is same.

With previous Growth Rate of 8% and $r = 10\%$, the retention ratio comes out to be:

$$0.08 = b_1 \times 0.10$$

$$b_1 = 0.80. \text{ So, payout ratio} = 0.20$$

With 0.20 payout ratio the EPS will be as follows:

$$\frac{\text{₹ } 25}{0.20} = \text{₹ } 125$$

With new 0.40 ($1 - 0.60$) payout ratio, the new dividend will be

$$D_1 = \text{₹ } 125 \times 0.40 = \text{₹ } 50$$

Accordingly, new K_e will be

$$K_e = \frac{50}{1,570} + 0.06$$

$$\text{or, } K_e = 9.18\%$$

9.

Particulars	(₹)
Total Sales	₹ 200 lakhs
Credit Sales (80%)	₹ 160 lakhs
Receivables for 40 days	₹ 80 lakhs
Receivables for 120 days	₹ 80 lakhs
Average collection period [(40 × 0.5) + (120 × 0.5)]	80 days
Average level of Receivables (₹ 1,60,00,000 × 80/360)	₹ 35,55,556
Factoring Commission (₹ 35,55,556 × 2/100)	₹ 71,111
Factoring Reserve (₹ 35,55,556 × 10/100)	₹ 3,55,556
Amount available for advance {₹ 35,55,556 - (3,55,556 + 71,111)}	₹ 31,28,889
• Factor will deduct his interest @ 18%:	
• Interest = $\frac{₹ 31,28,889 \times 18 \times 80}{100 \times 360}$	₹ 1,25,156
• Advance to be paid (₹ 31,28,889 – ₹ 1,25,156)	₹ 30,03,733

(i) Statement Showing Evaluation of Factoring Proposal

		₹
A.	Annual Cost of Factoring to the Firm:	
	Factoring commission (₹ 71,111 × 360/80)	3,20,000
	Interest charges (₹ 1,25,156 × 360/80)	<u>5,63,200</u>
	Total	<u>8,83,200</u>
B.	Firm's Savings on taking Factoring Service:	₹
	Cost of credit administration saved	2,40,000
	Bad Debts (₹ 160,00,000 × 1.5/100) avoided	<u>2,40,000</u>
	Total	<u>4,80,000</u>
C.	Net Cost to the firm (A – B) (₹ 8,83,200 – ₹ 4,80,000)	<u>4,03,200</u>

$$\text{Effective cost of factoring} = \frac{₹ 4,03,200}{₹ 30,03,733} \times 100 = 13.42\% \text{ }$$

* If cost of factoring is calculated on the basis of total amount available for advance, then, it will be
$$= \frac{₹ 4,03,200}{₹ 31,28,889} \times 100 = 12.89\%$$

- (ii) If Bank finance for working capital is available at 12%, firm will not avail factoring service as 12% is less than 13.42% (or 12.89%)

10. (a) **The most relevant sources of funds:**

Feature	Sources of Fund
(i) It is the most expensive source of funds.	Equity
(ii) It entails a high degree of risk since they have to be repaid as per the terms of agreement.	Debentures
(iii) It supports businesses in their routine activities.	Funding from Banks
(iv) Business enterprise has options to raise capital from International markets also.	International Funding
(v) This source of finance sometimes is the last option for startups which doesn't qualify for bank funding	Angel Financing

- (b) Trade credit and bank overdraft are two commonly used short-term financing sources but each has distinct features which are shown below:

S. No.	Trade credit	Bank overdraft
1.	Trade credit is the credit extended by suppliers, allowing the firm to delay payment for goods or services.	Under this facility, customers are allowed to withdraw in excess of credit balance standing in their Current Account.

2.	The usual duration of such credit is 15 to 90 days.	Though overdrafts are repayable on demand, they generally continue for long periods by annual renewals of the limits.
3.	Trade credit is a type of interest free loan, therefore failure to avail this facility has an interest cost.	Interest is charged on daily balances
4.	It generates automatically in the course of business and is common to almost all business operations.	Borrower need to apply to bank for Bank overdraft facility and are operated in the same way as cash credit and current accounts.
5.	It enhances automatically with the increase in the volume of business and fast payment.	A fixed limit is, therefore, granted to the borrower within which the borrower is allowed to overdraw his account.

- (c) The trade-off between the components of working capital can be summarised as follows:

Component of Working Capital	Advantages of higher side (Profitability)	Trade-off (between Profitability and Liquidity)	Advantages of lower side (Liquidity)
Inventory	Fewer stock-outs increase the profitability.	Use techniques like EOQ, JIT etc. to carry optimum level of inventory.	Lower inventory requires less capital but endangered stock-out and loss of goodwill.
Receivables	Higher Credit period attract	Evaluate the credit policy;	Cash sales provide liquidity

	customers and increase revenue (but can result in more bad debts)	use the services of debt management (factoring) agencies.	but fails to boost sales and revenue (due to lower credit period)
Pre-payment of expenses	Reduces uncertainty and profitable in inflationary environment.	Cost-benefit analysis required	Improves or maintains liquidity.
Cash and Cash equivalents	Payables are honoured in time, improves the goodwill and helpful in getting future discounts.	Cash budgets and other cash management techniques can be used	Cash can be invested in some other investment avenues
Payables and Expenses	Capital can be used in some other investment avenues	Evaluate the credit policy and related cost.	Payables are honoured in time, improves the goodwill and helpful in getting future discounts.

6B: STRATEGIC MANAGEMENT



QUESTIONS

Multiple Choice Questions

1. In the serene city of Pune, *Royal Pens* stood as a distinguished company with a rich heritage spanning a century. Specializing in crafting luxurious writing instruments, Royal Pens had long been known for its elegance and precision—valued by collectors and enthusiasts across the nation.

However, as the world progressed into the digital era, Royal Pens encountered a tsunami of challenges. Emerging substitutes quickly adapted to technological advancements, offering innovative writing solutions that appealed to a younger demographic. Despite its esteemed legacy, Royal Pens faced sluggish growth as it struggled to adapt to the evolving landscape of the writing instrument industry.

In an effort to stand out, Royal Pens strategized on ambitious endeavors. They experimented with new materials, introduced limited-edition designs and even forayed into digital pen technology, including *a Bluetooth-enabled stylus for tablets*—a move intended to attract tech-savvy users. Least expected, these initiatives failed to resonate with modern consumers. Their attempts to innovate were perceived as outdated or disconnected from actual user needs and their once-unquestionable reputation began to downgrade.

As Royal Pens struggled with reducing sales and increased competition, internal challenges started building up. Top executives including the CEO, CFO and the marketing head—accustomed to success—found themselves in a tough position to justify their acumen in the face of shifting market dynamics. Disagreements over strategic direction led to a wave of departures leaving a leadership vacuum at the top.

Amidst the turmoil, one aspect of Royal Pens remained strong: its unique company culture. Despite the challenges, middle managers and employees remained deeply dedicated to the company's traditions and

values. Compassionate leadership at the functional level ensured a sense of unity and resilience keeping the spirit of Royal Pens alive during uncertainty.

Yet the company's troubles were far from over. Royal Pens faced legal battles from a rival competitor alleging patent infringements. The ensuing legal proceedings drained resources and further depleted the company's finances worsening an already helpless situation.

Ultimately, Royal Pens faced a tough choice. With no clear path to recovery, the company made the painful decision to significantly scale down its operations. 70% of its business was discontinued and assets & equipment were sold off to generate much-needed funds. Though difficult, this decision allowed Royal Pens to redirect its resources toward niche opportunities preserving its legacy in a rapidly changing market.

Based on the above Case Scenario, answer the Multiple-Choice Questions.

- (i) Royal Pens, a century-old brand began losing relevance as the market embraced modern digital writing tools. What external environmental factor caused the greatest disruption to Royal Pens' business model requiring a strategic shift that the company struggled to make?
 - (a) Political instability
 - (b) Rising inflation
 - (c) Legal regulations
 - (d) Technological advancement
- (ii) After experiencing a decline in market share due to emerging competitors, Royal Pens responded by launching Bluetooth-enabled styluses and limited-edition pens. These actions were not pre-planned innovations but responses to market shifts. What type of strategic approach does this represent?
 - (a) Proactive strategy
 - (b) Reactive strategy
 - (c) Differentiation strategy

- (d) Market penetration strategy
 - (iii) To regain market share, Royal Pens launched limited-edition designs and a stylus pen, targeting younger, tech-driven customers. This strategic choice most closely reflects which of the following business-level strategies?
 - (a) Cost leadership
 - (b) Market development
 - (c) Differentiation
 - (d) Retrenchment
 - (iv) Despite facing legal disputes and financial decline, Royal Pens' workforce remained resilient and united. Which aspect of the company played the most vital role in maintaining employee morale and commitment during turbulent times?
 - (a) Employee stock ownership
 - (b) Regular salary hikes
 - (c) Strong company culture
 - (d) Remote working options
 - (v) Royal Pens believed that its century-old reputation alone would continue to appeal to modern consumers. This assumption formed the basis of its strategies, which ultimately failed as market dynamics shifted. Which type of strategic control was lacking, leading to unchallenged reliance on outdated assumptions?
 - (a) Premise control
 - (b) Special alert control
 - (c) Implementation control
 - (d) Strategic surveillance
2. A beverage company's marketing team launches a campaign to boost social media engagement. The production unit enhances efficiency to cut costs and the HR department implements new training programs to improve employee productivity. These departmental initiatives are

aligned with the company's overall growth goals. What type of strategy does these efforts represent?

- (a) Proactive strategy
 - (b) Reactive strategy
 - (c) Functional level strategy
 - (d) Corporate level strategy
3. A startup evaluates its strategic position by identifying its unique technology as a strength, high competition as a threat, an untapped market segment as an opportunity and operational inefficiencies as a weakness. It plans to use these insights to refine its business strategy. Which strategic tool is being used?
- (a) Competitor benchmarking analysis
 - (b) SWOT analysis
 - (c) PESTEL analysis for market dynamics
 - (d) Internal capabilities evaluation
4. A health-conscious community group strongly advocates for more organic options in local eateries and shows great interest in influencing food choices. However, a small local café, whose loyal customer base prefers traditional food remains unaffected by the group's efforts. In terms of Mendelow's Matrix, how should this stakeholder group be classified?
- (a) High Interest, High Power
 - (b) Low Interest, Low Power
 - (c) High Interest, Low Power
 - (d) Low Interest, High Power
5. A mobile phone company already has a strong customer base in its home country. To grow further, it focuses on increasing sales of its existing phones by offering promotional discounts, ramping up advertising and partnering with more local retailers for better

distribution. Which growth strategy does this represent according to Ansoff's Matrix?

- (a) Market penetration strategy
 - (b) Product development strategy
 - (c) Market development strategy
 - (d) Diversification strategy
6. A well-established clothing brand is experiencing a decline in sales and market share due to the changing consumer preferences and rising competition. In response, the company restructures its operations, cuts cost, revamps its product line, enhances marketing efforts and focuses on boosting employee morale and operational efficiency. What type of strategy is the company implementing?
- (a) Divestment strategy
 - (b) Market penetration strategy
 - (c) Cost leadership strategy
 - (d) Turnaround strategy

Descriptive Questions

Chapter 1-Introduction to Strategic Management

7. Vireon Foods started as a small dairy business but is still thriving after 25 years even as many competitors shut down or merged. Its leadership holds regular planning retreats, studies changing consumer habits and adapts its operations every few years. They recently invested in plant-based products before market demand spiked. What advantage is their strategic intelligence offering them? What are the other benefits of strategic management?
8. 'A company's mission statement is typically focused on its present business scope.' Explain the significance of a mission statement.

Chapter 2-Strategic Analysis: External Environment

9. Nuvanta Healthcare is planning to launch a nutrition supplement targeted at urban consumers in Tier-2 Indian cities. The product team analyzed local population data age groups, income levels, lifestyle patterns and health concerns before finalizing the formulation and pricing. They are also reviewing how changes in government policy and tech adoption may affect the rollout. What kind of external factor has Nuvanta considered for pricing the product? Briefly explain the major categories of such external influences that shape business strategy.
10. Value Chain Analysis consists of two activities: Primary activities and Support activities. As per Michael Porter both the activities are intertwined. Do you agree with the statement? Also delineate the main areas in which primary activities of any organization are grouped.

Chapter 3-Strategic Analysis: Internal Environment

11. Soltex Green Energy is rolling out a major wind project in a coastal town. A local business coalition with strong political ties and deep interest in the project has started influencing policy discussions. The company's strategy team is closely engaging with them while managing other stakeholders differently. What might be the reason Soltex is prioritizing engagement with this specific group? Identify and briefly explain the four types of stakeholder categories businesses typically deal with in such situations.
12. Write a short note on the Key Strategic Drivers of an organization.

Chapter 4-Strategic Choices

13. Zeon Beverages, known for its fruit juices, recently acquired a nationwide cold-storage logistics company to control the quality and speed of its product delivery. Earlier, it had set up its own fruit-processing unit to reduce dependence on third-party suppliers. The company believes this strategy strengthens its supply chain and market control. What type of strategic move is Zeon making through these acquisitions? How does this approach differ from horizontal and conglomerate diversification?

14. "There are certain conditions or indicators which point out that a turnaround is needed if the company has to survive". Discuss.

Chapter 5-Strategy Implementation and Evaluation

15. Merako Appliances recently automated its assembly line to produce kitchen gadgets faster and at lower cost, improving operational efficiency. However, customer feedback shows that the new products don't meet market needs, leading to declining sales. This has sparked an internal debate on balancing efficiency (doing things right) with effectiveness (doing the right things). How should Merako balance efficiency and effectiveness to achieve sustainable success? Also, describe the four possible situations a business can face when comparing levels of efficiency and effectiveness.
16. Describe the principal aspects of strategy-execution process which are included in most situations.



SUGGESTED ANSWERS

MCQ No.	Answer	
1.	(i)	(d)
	(ii)	(b)
	(iii)	(c)
	(iv)	(c)
	(v)	(a)
2.		(c)
3.		(b)
4.		(c)
5.		(a)
6.		(d)

7. Vireon Foods' continued success over 25 years despite the exit or merger of several competitors reflects the **importance and advantages of strategic management** particularly its contribution to the **longevity of a business**.

The strategic intelligence demonstrated by Vireon—through regular planning retreats, environmental scanning, understanding consumer behavior and timely investment in plant-based products—has provided it with a **competitive advantage** and the ability to **successfully navigate environmental changes**. This aligns with the dual objectives of strategic management:

- Creating competitive advantage by delivering something unique and valued by customers.
- Guiding the company through all changes in the environment by reacting appropriately.

Other benefits of strategic management evident from Vireon's case include:

- It enables the organization to be **proactive rather than reactive** helping it control its future instead of merely responding to change.
- It provides a **clear strategic direction** allowing the organization to align its goals and actions with its vision.
- It serves as a **framework for sound decision-making** related to markets, products, investments and structure.
- It helps organizations **identify and leverage opportunities** while avoiding costly pitfalls.
- It contributes to **building core competencies** and **sustaining long-term growth and survival** as seen in Vireon's ability to adapt and remain relevant.

Thus, strategic management not only ensures superior performance but also enhances the **sustainability and adaptability** of a business in a dynamic environment.

8. A company's mission statement is typically focused on its present business scope, **who we are and what we do**. Mission statements broadly describe an organization's present capability, customer focus, activities, and business make up. Mission for an organization is significant for the following reasons:
- It ensures **unanimity of purpose** within the organization.
 - It develops a basis, or standard, for **allocating organizational resources**.
 - It provides a basis for **innovating the use of the organisation's resources**.
 - It **establishes** a general tone or **organizational climate**, to suggest a business like operation.
 - It serves as a **focal point** for those who can identify with the **organisation's purpose and direction**.
 - It facilitates the **translation of objectives and goals into a work structure** involving the assignment of tasks to responsible elements within the organization.
 - It specifies organizational purposes and the **translation of these purposes into goals** in such a way that cost, time, and performance parameters can be assessed and controlled.
9. Nuvanta Healthcare has considered the **Demographic Environment** as an external factor for pricing its nutrition supplement. The analysis of local population data such as **age groups, income levels, lifestyle patterns, and health concerns** reflects the company's effort to understand its target consumers and formulate a suitable pricing strategy.

External environmental factors significantly influence an organization's strategy and operations. These factors may be external to the firm or introduced by managers to adapt to change. The major categories of such external influences that shape business strategy include:

- ♦ **Demographic Environment** – It includes factors such as population size, age distribution, income levels, education, and occupation, which affect consumer preferences and demand.

- ◆ **Economic Environment** – Includes elements like purchasing power, inflation rates, and overall economic conditions that influence pricing and market potential.
- ◆ **Political-Legal Environment** – Consists of government policies, regulations, and legal aspects that can impact product rollout and compliance requirements.
- ◆ **Technological Environment** – Rapid technological changes affect production, product design, marketing, and distribution, influencing how companies deliver value.
- ◆ **Socio-Cultural Environment** – Involves lifestyle patterns, health consciousness, social values, and consumer attitudes that influence buying behavior.

10. **Yes, I agree with the statement** that Value Chain Analysis consists of two activities: Primary activities and Support activities. As per Michael Porter, both the activities are intertwined. It is a tool used to examine the activities that create value in an organization, helping to enhance efficiency and build competitive advantage. It breaks down a business's operations to identify areas for improvement in value creation.

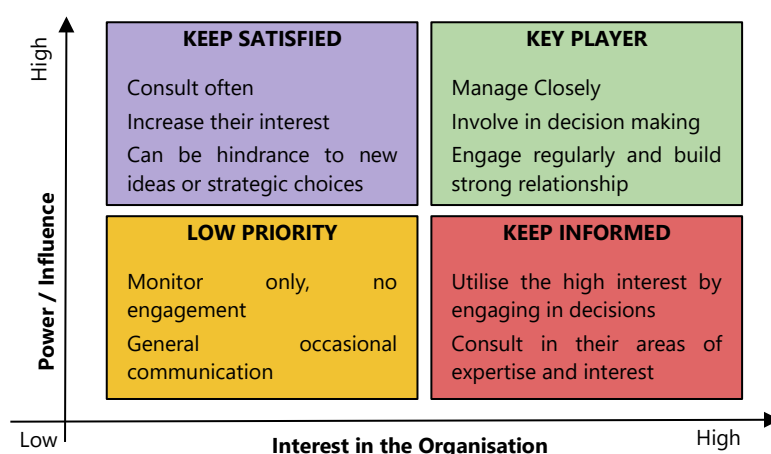
The **primary activities** of an organization are categorized into five areas:

1. **Inbound logistics:** Activities related to receiving, storing, and distributing inputs (e.g., materials handling, stock control, and transport).
2. **Operations:** Transforming input into final products or services (e.g., machining, packaging, assembly).
3. **Outbound logistics:** Collecting, storing, and delivering products to customers (e.g., warehousing, transport).
4. **Marketing and sales:** Promoting and selling the product or service, including advertising and sales administration.
5. **Service:** Enhancing or maintaining product value (e.g., installation, repair, training).

11. Soltex Green Energy is prioritizing engagement with the **local business coalition** because they fall under the category of **Key Players** in **Mendelow's Stakeholder Matrix**. This group possesses **high power** (due to strong political ties and ability to influence policy) and **high interest** (due to deep involvement in the wind project). As per Mendelow's Matrix, such stakeholders must be **fully engaged**, informed regularly, and their advice and expectations carefully considered, as they can significantly impact the success of the project.

Mendelow's Matrix categorizes stakeholders into four types based on their **Power** (ability to influence the organization) and **Interest** (concern with the organization's success):

1. **Key Players (High Power, High Interest):** These stakeholders should be **closely managed and fully engaged**. They are critical to strategic decisions.
2. **Keep Satisfied (High Power, Low Interest):** These stakeholders should be kept **satisfied with regular information** but not over-communicated with.
3. **Keep Informed (Low Power, High Interest):** These stakeholders must be kept **adequately informed** to avoid misunderstandings and gain useful feedback.
4. **Low Priority (Low Power, Low Interest):** These stakeholders require **minimal effort**, only to be **monitored occasionally**.



Mendelow's Matrix thus helps organizations like Soltex to allocate their **time, resources, and communication efforts** strategically across different stakeholder groups, adjusting the engagement as the environment evolves.

12. Key Strategic Drivers of an Organization

Strategic drivers are essential elements that influence an organization's ability to differentiate itself from its competitors and achieve competitive advantage. These drivers assess the current performance of the business and provide insights into areas that need focus.

The key strategic drivers include:

1. **Industry and Markets:** Understanding the industry and markets is crucial for identifying the organization's relative position. Industries group similar companies based on their primary products, while markets are defined by the buyers and sellers of these products. Analyzing industry and market dynamics, often through tools like strategic group mapping, helps organizations evaluate competition and refine strategies.
2. **Customers:** Identifying and understanding customers is a critical driver. Customers are segmented based on their needs and spending capacity, which guides product development and marketing strategies. Differentiating between customers (buyers) and consumers (users) is vital to tailoring pricing, design, and usability strategies effectively.
3. **Products and Services:** Products and services are central to defining the business. Organizations must assess their offerings, classify products, and devise strategies for differentiation, branding, and pricing. Product innovation and marketing are key to maintaining competitiveness.
4. **Channels:** The channels through which products and services are delivered impact on accessibility and customer satisfaction. Strategies related to direct, digital, or relationship-based

marketing ensure the efficient distribution of offerings to target customers.

By aligning these drivers with organizational goals, businesses can achieve sustained growth and maintain a competitive edge.

13. Zeon Beverages is pursuing a strategy of **vertically integrated diversification**, a form of **concentric diversification**, where the company expands into businesses that are related to its existing operations along the value chain. By **setting up its own fruit-processing unit** (backward integration) and **acquiring a cold-storage logistics company** (forward integration), Zeon is strengthening its supply chain, improving quality control and enhancing speed of delivery.

This move falls under **concentric diversification**, where the new businesses are linked to existing ones through process, technology or marketing, providing synergistic benefits. This approach differs from:

1. **Horizontal Integrated Diversification** – where a firm expands by acquiring similar or complementary businesses operating at the same stage of production. For example, if Zeon had acquired another fruit juice brand, it would be horizontal diversification.
2. **Conglomerate Diversification** – which involves expansion into **unrelated businesses** with no connection in terms of product, market, or technology. For instance, if Zeon ventured into unrelated sectors like real estate or electronics, it would be conglomerate diversification.

Hence, Zeon's strategy is a **vertically integrated concentric diversification**, aimed at enhancing operational efficiency and gaining better control over its value chain.

14. In today's competitive and volatile business environment, no organization can assume sustained viability. A **turnaround strategy** is a focused effort aimed at restoring an organization's profitability and ensuring survival when both internal weaknesses and external threats endanger its existence.

Turnaround becomes necessary when a company faces a significant crisis that severely affects its operations and performance. It is typically adopted when survival is the immediate goal, before growth can be pursued.

There are several **indicators or conditions** that signal the need for a turnaround strategy:

- Persistent negative cash flows from operations
- Uncompetitive products or services
- Declining market share
- Deterioration in physical facilities
- Over-staffing, high employee turnover, and low morale
- Mismanagement

Early identification of these danger signals and immediate corrective action is essential for ensuring the company's survival and eventual recovery.

15. Merako Appliances has improved operational **efficiency** by automating its assembly line. However, declining sales due to products not meeting customer needs indicate a lack of **effectiveness**. This highlights the importance of balancing *doing things right* (efficiency) with *doing the right things* (effectiveness).

To achieve **sustainable success**, Merako must align its operations with customer preferences through sound **strategy formulation** (effectiveness), followed by efficient **strategy implementation**.

Four Possible Situations Based on Efficiency and Effectiveness:

1. **Efficient and Effective (Thrive):** Ideal scenario. The firm does the right things and does them well. Merako should aim for this by aligning products with customer needs while maintaining efficiency.

2. **Efficient but Ineffective (Die Slowly):** Merako's current state. Operations are streamlined, but customer needs are unmet, risking decline without strategic correction.
3. **Inefficient but Effective (Survive):** Right strategy but poor execution. The firm may survive but must improve efficiency to sustain.
4. **Inefficient and Ineffective (Die Quickly):** Neither aligned with customer needs nor operationally sound. Leads to rapid failure unless overhauled.

Strategic Formulation

		Effective	Ineffective
Operational Management	Efficient	1 Thrive	2 Die Slowly
	Inefficient	3 Survive	4 Die Quickly

Principal combinations of efficiency and effectiveness

Merako must integrate **customer feedback** into strategic planning and ensure both efficient execution and effective direction to gain long-term competitiveness.

16. Implementation **or execution** is an operations-oriented activity aimed at shaping the performance of core business activities in a strategy-supportive manner. In most situations, strategy-execution process includes the following principal aspects:
 - ♦ **Developing budgets** that steer ample resources into those activities that are critical to strategic success.
 - ♦ **Staffing the organization with the needed skills and expertise**, consciously building and strengthening strategy-supportive competencies and competitive capabilities and organizing the work effort.

- ◆ **Ensuring that policies and operating procedures facilitate** rather than impede effective execution.
- ◆ **Using the best-known practices to perform core business activities** and pushing for continuous improvement.
- ◆ **Installing information and operating systems** that enable company personnel to better carry out their strategic roles day in and day out.
- ◆ **Motivating people to pursue the target objectives energetically.**
- ◆ **Creating culture and climate conducive** to successful strategy implementation and execution.
- ◆ **Exerting the internal leadership** needed to drive implementation forward and keep improving strategy execution.