INTERMEDIATE COURSE

GROUP – II

REVISION TEST PAPERS

JANUARY, 2025

BOARD OF STUDIES

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

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REVISION TEST PAPER, JANUARY 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 (BOS) to its students. Popularly referred to as RTP by the students, it is one of the very old publications of the BOS 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, 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 19 questions: Division A (Case scenario and caselet based MCQs) which contains 7 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.	Marginal Costing	Calculation of break-even point and price for the items.
2.	Process Costing	Preparation of Statement of equivalent production, cost per unit, cost of units transferred.
3.	Employee Cost	Calculation of labour cost under Bonus system.
4.	Overheads	Calculation of Machine hour rate.
5.	Cost Sheet	Calculation of Raw material purchased.
6.	Joint product and By product	Calculation of joint cost using NRV method.
7.	Marginal Costing	Calculation of break-even point and PV ratio.
Division B		
8.	Material Cost	Calculation of EOQ and acceptance of offer.
9.	Employee Cost	Calculation and Selection of Bonus system.
10.	Overheads	Preparation of Profitability statement.
11.	Cost Sheet	Preparation of Statement of Cost.
12.	Cost Accounting System	Preparation of Reconciliation.
13.	Job and Batch Costing	Compute the cost and profit/loss per batch and overall position.

14.	Joint product and By product	Calculation of joint cost and profit with further processing decision.
15.	Service Costing	Calculation of total cost and average cost.
16.	Standard Costing	Calculation of Material variances.
17.	Marginal Costing	Calculation of Minimum price.
18.	Budget and Budgetary Control	Preparation of Flexible budget.
19(a)	Marginal Costing	Advantages of Marginal Costing.
19(b)	Cost Accounting System	Financial expenses and income included in financial accounts only.
19(c)	Joint product and By product	Treatment of By-product.
19(d)	Process Costing	Normal and Abnormal Process Loss.

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, student journal, bare acts etc.

RTP of Auditing and Ethics for January 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 11 questions: Division A (Case scenario based MCQs) which contains 1 case scenario and 2 caselets and Division B (Descriptive questions) which contains 8 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.	Integrated Case Scenario	Analysis for a project.
2.	Dividend Decision	Calculation of MPS as per Gorden's model
3.	Cost of Capital	Calculation of Cost of Equity.
Division B		
4.	Ratio Analysis	Calculation of various ratios.

5.	Cost of Capital	Calculation of WACC.
6.	Capital Structure	Calculation of market price.
7.	Leverage	Preparation of Income Statement and Calculation of MoS.
8.	Dividend Decision	Analysis of dividend policy using Walter's model.
9.	Investment Decision	Calculation of NPV, IRR and Desirability Factor.
10.	Working Capital	Calculation of Effective rate of interest
11(a)	Scope and Objectives of Financial Management	Emerging issues affecting the role of CFO.
11(b)	Cost of Capital	Methods for computation of Cost of Equity.
11(c)	Investment Decision	Profitability Index or NPV

Section – B: Strategic Management

The Revision Test Paper on the subject of Strategic Management for the January 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

Marginal Costing

1. Popular company produces various articles for student purposes. It has been in industry since last 25 years. Company had a very humble start but gained popularity over the years due to excellent quality products which were sold at very competitive prices. Company has huge reserves and feel that it is also obligated to give back to the society from which it has grown.

   Last year management decided to produce and supply special quality school bags, water bottles, & geometry boxes to NGOs, at no price, as a social responsibility. These articles were simple looking but were more durable, that would not have wore-off easily and could have been used for long-term.

   This year management wants to add another dimension to this social work. It approached charitable schools and government run schools and offered them the supply of the same articles, at cost. This will help students in these schools to get these things at a very low price compared to market.

   The variable costs are ₹ 100, ₹ 80, and ₹ 40 for school bags, water bottles, and geometry boxes, respectively. These articles are made using a single machine. 0.20 hours of machine operation is required for manufacturing 1 unit of school bag. Similarly, machine hours required for each units of water bottle and geometry box is 0.15 hours and 0.10

hours, respectively. Fixed overhead related to machine is ₹ 7,40,000 per year. Machine can operate for 8,000 hours in a year.

Company has decided to sell its 80% capacity production in markets. Rest is divided amongst the 2 undergoing social works, equally.

All Schools requests these items in the ratio of 2:3:5, as per their demand by the school students.

Company wants to set a price for these articles to be offered to the schools. Management has few questions they need the answers to. They assigned the task to their team. Team made rough calculations but as there were too many people on the team, each came up with different answers. As a Chartered accountant, you have been approached. Understand the case closely, find the correct answers and help management to set a price.

Answer the following:

(i) What is allocated fixed cost per unit of School bags, water bottles, and geometry boxes?

(a) 18.5, 13.875, 9.75

(b) 18.5, 13.875, 9.25

(c) 18.5, 13.785, 9.25

(d) 18.5, 13.785, 9.50

(ii) If the prices were ₹ 200, ₹ 160, and ₹ 100, what would be the overall break-even point in units in relation to fixed cost allocated to these supplies?

(a) 308.33 units

(b) 500 units

(c) 508.33 units

(d) 1,000 units

(iii) Find out the maximum number of units of each article that can be given at the prices given in Part (ii).

(a) 61, 92, 154

(b) 200, 300, 500

(c) 101, 152, 254

(d) 100, 150, 250

(iv) What will be the maximum units that can be supplied to the schools of each article?

(a) 1103, 1645, 2726

(b) 1093, 1655, 2748

(c) 1185, 1777, 2962

(d) 1133, 1675, 2958

(v) What should be the correct price for each item as per the management's decision?

(a) 118.50, 93.875, 49.75

(b) 118.50, 93.785, 49.25

(c) 118.50, 93.785, 49.50

(d) 118.50, 93.875, 49.25

Process Costing

2. Knowing the hectic schedule of a student preparing for the examination, a homemaker managing work from home or a new parent busy in neonatal care, a freshly qualified professional (Mr. Rishi) entered into a start-up business of manufacturing frozen foods.

The process majorly involve washing and cutting the vegetables (Process I), blanching, cooling and mixing of ingredients with spices (Process II), forming, frying and freezing the final product (Process III).

In Accounts, Mr. Rishi normally transfers the output of one process to another process at cost but, being a young entrepreneur, he is interested in knowing the profit made at each and every process. Thus, it was decided to transfer the output of Process I and II to the next process at cost plus 25%. Further, the output of Process III is also transferred to finished stock at cost plus 33 1/3%.

Following information is extracted from the books of Mr. Rishi for the current year:

	Process I (₹)	Process II (₹)	Process III (₹)	Finished Stock (₹)
Opening stock	8,02,500	14,44,500	21,40,000	24,07,500
Direct materials	42,80,000	34,77,500	26,75,000	--
Direct wages	66,87,500	57,78,000	49,22,000	--
Factory overheads	51,36,000	38,52,000	35,57,750	--
Closing stock	10,70,000	17,12,000	20,86,500	26,75,000
Inter-process profit included in opening stock	NIL	2,14,000	5,35,000	10,70,000

Stock in processes is valued at prime cost. The finished stock is valued at the price at which it is received from Process III.

Mr. Rishi wants you to FIGURE OUT the following to analyse the profit generated at each process:

(i) What is the transfer price value at which the output of Process I is transferred to Process II?

(a) ₹ 1,97,95,000

(b) ₹ 39,59,000

(c) ₹ 1,58,36,000

(d) ₹ 1,69,06,000

(ii) What is the transfer price value at which the output of Process II is transferred to Process III?

(a) ₹ 1,20,97,476

(b) ₹ 4,07,93,750

(c) ₹ 2,86,96,274

(d) ₹ 3,43,47,000

(iii) What is the transfer price value at which the output of Process III is transferred to Finished Stock?

(a) ₹ 5,40,88,500

(b) ₹ 3,98,91,140

(c) ₹ 2,94,44,860

(d) ₹ 6,93,36,000

(iv) What is the cost value at which the output of Process III is transferred to Finished Stock?

(a) ₹ 5,40,88,500

(b) ₹ 3,98,91,140

(c) ₹ 2,94,44,860

(d) ₹ 6,93,36,000

(v) What is the cost value of closing stock of Process III A/c?

(a) ₹ 20,86,500

(b) ₹ 15,64,884

(c) ₹ 3,98,91,140

(d) ₹ 5,21,616

Employee Cost and Direct Expenses

3. Phalsa Ltd. pays its workers on time-basis because their services cannot be tangibly measured. The company's normal working week includes 5 days of 8 hours each. Sometimes, the workers needs to work late at night which was 3 nights of 3 hours each for the current week. The average output produced per worker for the week is 120 units.

Information regarding incentive rate is as follows:

Rate of Payment	Day shift: ₹ 320 per hour
	Night shift: ₹ 450 per hour

However, this time-basis payment made workers lazy, making their expected output lower. As workers started doing more of the night shifts

for higher earnings with minimal impact on the outputs, the company decided to shift on to a system of payments on output basis. Information regarding amended incentive rate is as follows:

Time-rate (as usual)	:	₹ 320 per hour
Basic time allowed for 15 units	:	5 hours
Piece-work rate	:	Add 15% to basic piece-rate

In the amended incentive system, the normal weekly working hours remained the same while production increased to 135 units.

CALCULATE the labour cost per unit as per the existing incentive system, along with the amended incentive system.

(a) ₹ 140.42 and ₹ 122.67 respectively

(b) ₹ 124.81 and ₹ 138.00 respectively

(c) ₹ 124.81 and ₹ 122.67 respectively

(d) ₹ 140.42 and ₹ 138.00 respectively

Overheads- Absorption Costing Method

4. Gaarmentz Ltd. run a sewing factory for medical garments. But, the company suffers from the limiting factor i.e. labor. Each sewing machine needs 100% attention of one person at a particular point of time to operate it. The company has 8 number of alike sewing machines on which 8 operators work separately. The following particulars are furnished for a six months period:

Paid hours for all the 8 operators	9,594 hours
Effective working hours for all the 8 operators	9,360 hours
Average rate of wages per day of 8 hours per operator	₹ 110
Power consumed	₹ 60,125
Supervision and Indirect Labour	₹ 21,450
The following particulars are given for a year:	
Insurance	₹ 4,68,000
Sundry Expenses	₹ 7,15,000

Depreciation charged is 10% on the original cost of all the sewing machines.

Repairs and Maintenance comes to 5% of the value of all the sewing machines.

The original cost of all the sewing machines works out to ₹ 41,60,000

CALCULATE the Comprehensive Machine Hour Rate.

(a) ₹ 215.86

(b) ₹ 217.99

(c) ₹ 116.43

(d) ₹ 119.34

Cost Sheet

5. Following information is available for the month of March relating to manufacturing of a product:

Particulars	Amount (₹)
Cost of Sales	37,51,540
Stock of Raw material as on 01st March	6,50,000
Direct Wages	11,44,000
Hire charges paid for Plant (indirect expenses)	3,24,740
Salary to office staff	1,78,750
Maintenance of office building	13,000
Depreciation on Delivery van	39,000
Warehousing charges	61,750
Stock of Raw material as on 31st March	1,95,000
Realisable value on sale of scrap	32,500

Factory overheads are 20% of the Prime cost.

FIND OUT the value of Raw Material purchased with the help of Statement of Cost.

(a) ₹ 10,40,000

(b) ₹ 14,95,000

(c) ₹ 26,39,000

(d) ₹ 34,91,540

Joint Products and By products

6. ICT Ltd. belongs to pharmaceutical industries. The chemical process that ICT Ltd. operates convert one compound into three category of medicines viz. BetaTab, Folick and TegriCap. Though BetaTab and Folick are already converted to final product at split-off point, Tegricap needs further processing along with addition of new compound with it.

The market for BetaTab and Folick is highly active, thus the production is sold at split-off point, however, Tegricap can be sold only after further processing.

Following information is provided for the current year:

Products	Quantity sold (tons)	Selling price per ton (₹)
BetaTab	372	7,500
Folick	1,054	5,625
TegriCap	1,472	3,750

The selling price is expected to remain the same for coming years.

The total joint manufacturing costs till split-off point is ₹ 62,50,000 and the amount spent for further processing w.r.t. Tegricap is ₹ 31,00,000

The details regarding closing inventories are as follows:

Products	Completed units (tons)
BetaTab	360
Folick	120
TegriCap	50

You are required to COMPUTE the joint cost allocated to BetaTab, Folick and TegriCap using Net realizable value (NRV) method.

(a) BetaTab- ₹ 15,65,481, Folick - ₹ 33,26,647 and TegriCap - ₹ 13,57,872

(b) BetaTab - ₹ 23,33,985, Folick - ₹ 28,07,478 and TegriCap - ₹ 11,08,537

(c) BetaTab - ₹ 19,27,533, Folick - ₹ 23,18,570 and TegriCap - ₹ 20,03,897

(d) BetaTab - ₹ 11,08,537, Folick - ₹ 28,07,478 and TegriCap - ₹ 23,33,985

Marginal Costing

7. Ms. Gauri has the business of selling pens. She has setup this pen retailing for over 10 years with good profit volume ratio. Her average cost from the retailing is ₹ 11.25 per unit if she sells 16,000 units and is ₹ 11 per unit if she sells 20,000 units.

For the current month, she also charged ₹ 5,000 towards depreciation and the rental payment due.

The excess of sales revenue over the variable costs is ₹ 3.333 per unit.

You are required to CALCULATE Break-even Point (in units), Cash Break-even Point (in units) and Profit Volume Ratio.

(a) Break-even Point- 6,000 units, Cash Break-even Point- 6,000 units and Profit Volume Ratio- 33.33%

(b) Break-even Point- 6,000 units, Cash Break-even Point- 4,500 units and Profit Volume Ratio- 25%

(c) Break-even Point- 4,500 units, Cash Break-even Point- 4,500 units and Profit Volume Ratio- 33.33%

(d) Break-even Point- 4,500 units, Cash Break-even Point- 4,500 units and Profit Volume Ratio- 25%

PART-II Descriptive Questions

Material Cost

8. Ani Ltd. uses 6 kg. of Material 'EXE' to produce 1 finished unit of Product 'EME'. The current demand of Product 'EME' is 16,000 units quarterly. 1 kg. of Material 'EXE' costs ₹ 40. The cost relating to quotations, documentation works, employee cost directly attributable to the procurement of material, every-time the order is made, is ₹ 2,000. The

cost of fund invested in inventories, cost of storage, insurance cost, etc. is estimated to be 15% per annum of average inventory.

You are required the following:

(i) CALCULATE the Economic Order Quantity for Material 'EXE'.

(ii) COMMENT, should Ani Ltd. accept an offer of 2.5% discount by the supplier of Material 'EXE', if supply of the annual requirement of the Material is made in 4 equal installments?

Employee Cost and Direct Expenses

9. AeBee Publishers works for various educational institutes for editing, binding, printing of various books and magazines on job work basis. Currently, the company has employed 30 workers and pays them on hour rate basis for each job assigned. To complete one of the process of binding, the average time allowed to an employee is 8 hours for a 10 pages magazine.

In the month of March, two employees 'Cee' and 'Dee' were given 21 and 30 units of magazines respectively for binding work. The following are the details of the work assigned:

Particulars	'Cee'	'Dee'
Work assigned	21 units	30 units
Time taken	78 hours	114 hours

The existing rate of wages is ₹ 60 per hour along with bonus as per Halsey System.

However, a new wage agreement has been signed between the employees and the company where, employees will be paid ₹ 65 per hour with effect from the April month. But, inadvertently, for the month of March, the accountant of the company paid the wages to these employees considering rate of wages as ₹ 65 per hour.

You are required to CALCULATE the following:

(i) Amount of loss that the company has incurred due to incorrect rate selection in the month of March.

(ii) Loss incurred by the company due to incorrect rate selection if it had followed Rowan scheme of bonus payment.

(iii) Amount that could have been saved if Rowan Scheme of bonus payment were followed.

Overheads- Absorption Costing Method

10. Han Ltd. sells three products namely 'A', 'B' and 'C'. The following information is available regarding sales, costs and activity for the year ended 31st March:

Particulars	A	B	C
Sales (₹)	60,00,000	90,00,000	54,00,000
Cost of Sales (₹)	30,00,000	78,00,000	27,00,000
Area of storage (sq.ft.)	72,000	1,08,000	36,000
Number of parcels sent	2,40,000	3,00,000	2,10,000
Number of invoices sent	60,000	90,000	1,44,000

Selling and Distribution overheads and the basis of allocation are as follows :

Fixed Cost	Amount (₹)	Basis of allocation to Products
Rent and Insurance	6,00,000	Square feet
Depreciation	2,70,000	Parcel
Salesman's salaries & expenses	11,40,000	Sales Volume
Administrative wages and salaries	9,00,000	No. of Invoices
Variable Costs:		
Packing wages & materials		₹ 4.80 per parcel
Commission		2.40% of sales
Stationery		₹ 1.80 per invoice

Finance Manager of the Company has recommended to discontinue the Product 'C' since it's sales is less compared to other products.

You are required to PREPARE the profitability statement of each product, showing the percentage of profit/ (loss) on sales for each product, and also EXAMINE the recommendation of Finance Manager.

Cost Sheet

11. IC Ltd. manufactures two types of phone covers, one is 'plastic' phone cover and another is 'silicon' phone cover.

The cost data relating to the manufacturing of both the phone covers for the year ended 31st March is provided below:

Particulars	Amount (₹)
Direct Materials	1,00,00,000
Direct Wages	56,00,000
Production Overhead	32,00,000
Total	1,88,00,000

Other information relating to the production of the phone covers is as follows:

- Direct material cost per unit of 'silicon' phone cover was twice than that of 'plastic' phone cover.
- Direct wages per unit for 'plastic' phone cover were 60% of those for 'silicon' phone cover.
- Production overhead per unit was at same rate for both the type of phone covers.
- Administration overhead being part of cost of production was 50% of Production overhead.
- Selling cost and Selling Price of 'silicon' phone cover were ₹ 8 and ₹ 140 per unit respectively.
- No. of units of 'silicon' phone covers sold- 90,000
- No. of units of Production of -

  'silicon' phone cover: 1,00,000

  'plastic' phone cover: 3,00,000

You are required to PREPARE a cost sheet for 'silicon' phone cover showing Cost and Profit (per unit and Total).

Cost Accounting Systems

12. Following information is extracted as a result of scrutiny of the figures from both the financial accounts and cost accounts of CK Ltd. for the year ending 31st March:

Particulars	Amount (₹)
Net Profit (as per cost accounts)	57,71,840
Under recovery of selling overheads in cost accounts	1,16,800
Under valuation of closing stock in cost accounts	1,64,000
Rent received credited in financial accounts	87,200
Bad debts provided in financial accounts	52,000
Income tax provided in financial accounts	2,54,400
Under recovery of administration overheads in cost accounts	1,50,400

You are required to PREPARE a Statement of Reconciliation showing the profit as per financial records.

Batch Costing

13. Phonick Ltd. accepted an order to supply 2,000 units per month of Product 'E' for the third quarter of the year. Each monthly batch order records the actual costs of materials and labour. Overheads are charged at a rate per labour hour. The selling price is established at ₹ 15 per unit.

Information relating to Material, Labour and Overheads is provided below:

Month	Batch Output (Numbers)	Material Cost (₹)	Labour Cost (₹)	Overheads (₹)	Total Labour Hours
October	2,500	12,500	5,000	24,000	8,000
November	3,000	18,000	6,000	18,000	9,000
December	2,000	10,000	4,000	30,000	10,000

Labour is paid at the rate of ₹ 2 per hour.

CALCULATE the cost and profit per unit of each batch order along with the overall position of the order for 6,000 units.

Joint Products and By products

14. JPBP Ltd. manufactures two joint products A and B simultaneously from the same process. The process produces another product C which is recovered incidentally from the material used in the manufacture of A and B.

The expenditures incurred up to the point of separation i.e. split-off point are ₹ 14,82,000. As the joint products are capable of being measured in the same units, joint costs are allocated on the basis of physical unit.

Though the joint products A and B are saleable at split-off point, these can also be further processed and sold at a higher market price, with some sales promotion efforts. However, product C can be sold only after further processing.

The management is of the view that, as the net realisable value of the product C at split off point is too small, the value may be deducted from the joint production cost.

The relevant details of the products are as follows:

Particulars	Product A	Product B	Product C
Output (kg.)	16,250	8,125	1,625
Selling price at the split-off point (per kg.) (₹)	72	80	-
Further processing cost (per kg.) (₹)	16	20	8
Further marketing cost (per kg.) (₹)	8	8	4
Selling price after further processing (per kg.) (₹)	112	104	24

You are required the following:

(i) DETERMINE the profit/ (loss) of each joint product if these are sold without further processing.

(ii) WHETHER joint products be processed further? Decide on the basis of incremental profit/ (loss).

Service Costing

15. Roshan Travels provide bus facility to a College for carrying its students from home to College and dropping them back at home after study hours. The travel company runs a fleet of 6 buses for this purpose and park them in the college premises.

The information regarding bus running is as follows:

(I) The College operates in two shifts (one in the morning and one in the afternoon).

(II) The distance travelled by each bus one way is 20 kms.

(III) The students need to attend the college for 30 days in a month.

(IV) The seating capacity of each bus is 30 persons.

(V) The seating capacity is normally 80% occupied during the year.

The information regarding expenses incurred for a year is as follows:

Particulars	Amount
Driver and attendant salary	₹ 60,000 per bus per month
Cleaner's salary (One cleaner for 2 buses)	₹ 30,000 per cleaner per month
Diesel (Avg. 8 kms per litre)	₹ 160 per litre
Insurance charges (per annum)	2% of Purchase Price
License fees and taxes	₹ 10,160 per bus per month
Parking charges paid	₹ 36,000 per month
Repair & maintenance including engine oil and lubricants (for every 5,760 kms)	₹ 5,712 per bus

Purchase Price of each bus	₹ 30,00,000
Residual life of each bus	8 Years
Scrap value per bus at the end of residual life	₹ 6,00,000

Students coming from a distance of beyond 10 kms away from the College are charged double the fare than that from students coming from a distance of up-to 10 kms. away from the College. 50% of students travelling in each trip are coming from a distance beyond 10 kms. from the College. The charges are to be based on average cost.

You are required to:

(i) PREPARE a statement showing expenses of operating a single bus for a year.

(ii) CALCULATE the average cost per student per month in respect of:

(a) Students coming from a distance up-to 10 kms. from the College.

(b) Students coming from a distance beyond 10 kms. from the College.

Standard Costing

16. Banku manufacturing Ltd. is engaged in producing a item named 'ABC'. It produces 'ABC' in a batch of 100 kgs. Standard material inputs required for 100 kgs. of 'ABC' are as below:

Material	Quantity (in kgs.)	Rate per kg. (in ₹)
A	50	110
B	30	320
C	30	460

During the month of April, 2024, actual production was 50,000 kgs. of 'ABC' for which the actual quantities of material used for a batch and the prices paid thereof are as under:

Material	Quantity (in kgs.)	Rate per kg. (in ₹)
A	60	115
B	25	330
C	20	405

You are required to CALCULATE the following variances based on the above given information for the month of April, 2024 for Banku manufacturing Ltd.:

(i) Material Cost Variance;

(ii) Material Price Variance;

(iii) Material Usage Variance;

(iv) Material Mix Variance;

(v) Material Yield Variance.

Marginal Costing

17. XYZ Ltd. is a company involved in production and construction specialised equipment and machines on the demand of customers. The company received an order for construction of a specialised machine, it had nearly completed this job relating to construction of a specialised machine, when it discovered that the customer had gone out of business. At this stage, the position of the job was as under:

	(₹)
Original cost estimate	27,50,000
Costs incurred so far	24,80,000
Costs to be incurred	3,70,000
Progress payment received from original customer	15,50,000

After searches, a new customer for the machine has been found. He is interested to take the machine, if certain modifications are carried out. The new customer wanted the machine in its original condition, but without its AI device and with certain other modifications. The costs of these additions and modifications are estimated as under:

Direct Materials (at cost)	₹ 1,05,000
Direct Wages Dept.: X	35 men days
Dept.: Y	55 men days
Variable Overheads	30% of Direct Wages in each Dept.
Delivery Costs	₹ 15,500

Fixed overheads will be absorbed at 50% of direct wages in each department.

The following additional information is available:

(1) The direct materials required for the modification are in stock and if not used for modification of this order, they will be used in another job in place of materials that will now cost ₹ 1,50,000.

(2) Department X is working normally and hence any engagement of labour will have to be paid at the direct wage rate of ₹ 1,000 per man day.

(3) Department Y is extremely busy. Its direct wages rate is ₹ 1,200 per man day and it is currently yielding a contribution of ₹ 3 per rupee of direct wages.

(4) Additional supervisory required for the modification cost ₹ 80,000.

(5) The cost of the AI device that the new customer does not require is ₹ 1,35,000. If it is taken out, it can be used in another job in place of a different mechanism. The latter mechanism has otherwise to be bought for ₹ 1,05,000. The dismantling and removal of the control mechanism will take 5 man day in department X.

(6) If the conversion is not carried out, some of the materials in the original machine can be used in another contract in place of materials that would have cost ₹ 2,00,000. It would have taken 5 men days of work in department X to make them suitable for this purpose. The remaining materials will realize ₹ 1,50,000 as scrap. The drawings, which are included as part for the job can he sold for ₹ 45,000.

You are required to CALCULATE the minimum price, which the company can afford to quote for the new customer as staled above.

Budgets and budgetary control

18. BT Ltd. achieves sale of ₹ 73,12,500 with COGS of 40% while operating at 75% of its normal capacity during the current financial year.

The information relating to Administration, Selling and Distribution costs is given below:

Administration costs:

Office salaries	₹ 11,70,000
General expenses	5 per cent of COGS
Depreciation	₹ 97,500
Rates and taxes	₹ 1,13,750

Selling costs:

Salaries	8 per cent of sales
Travelling expenses	5 per cent of COGS
Sales office expenses	2.5 per cent of COGS
General expenses	2.5 per cent of COGS

Distribution costs:

Wages	₹ 1,95,000
Rent	1 per cent of sales
Other expenses	10 per cent of COGS

Considering some of the expenses like office salaries, depreciation, rates and taxes, and wages, to remain the same irrespective of the level of activity, as these expenses are fixed in nature, PREPARE flexible administration, selling and distribution costs budget, operating at 85%, 100% and 115% of normal capacity.

Miscellaneous

19. (a) DISCUSS advantages of Marginal Costing.

(b) LIST DOWN certain financial expenses and income included in Financial Accounts only.

(c) DISCUSS the treatment of By-product cost in joint cost accounting when they are of small total value.

(d) DISCUSS normal and abnormal Process Loss and ENUMERATE their treatment in Cost Accounts.

SUGGESTED ANSWERS/HINTS

Note: Figures are rounded off to the nearest figures to remove approximation error, wherever required.

1. (i) (b) Fixed overhead = 740000

Total machine hours = 8000 hours

Fixed OH per hour= ₹ 92.5

Fixed OH per unit of:

- School bag = 0.20 x 92.5 = ₹ 18.5
- Water bottle = 0.15 x 92.5 = ₹ 13.875
- Geometry box = 0.10 x 92.5 = ₹ 9.25

(ii) (d) Hours allocated = 8000 x 10% = 800 hours

Fixed overhead allocated = 800 x 92.5 = ₹ 74,000

Contribution:

- Bag = 200-100 = 100
- Bottle = 160-80=80

- Geometry = 100- 40 = 60

Composite contribution = 100 x 2/10 + 80 x 3 / 10 + 60 x 5/10 = ₹ 74

Overall breakeven point for this assignment is = fixed cost allocated/composite contribution = 74,000/74 = **1,000 units**

(iii) **(b)** 1000 units are to be distributed in the ratio of 2:3:5

Bag = 200 units, bottle = 300 units, geometry = 500 units

(iv) **(c)** Total hours = 800 hours

let total no of units = X

Supply: bag 2/10 x X; bottle 3/10 x X; geometry 5/10 x X

Hours: (2X/10) x 0.20 + (3X/10) x 0.15 + (5X/10) x 0.10 = 800 hours

X = 5925

Units of :

- Bag = 2/10 x 5925 = 1185
- Bottle = 3/10 x 5925 = 1777.5 or 1777
- Geometry = 5/10 x 5925 = 2962.5 or 2962

(v) **(d)** Correct price is AT COST.

COST = Marginal Cost Per Unit + Fixed Overhead Cost Allocated Per Unit

	Bag	**Bottle**	**Geometry**
Variable cost per unit	100	80	40
Fixed cost per unit	18.5	13.875	9.25
Total	**118.5**	**93.875**	**49.25**

2. (i) (a) Process I Account

Particulars	Cost (₹)	Profit (₹)	Total (₹)	Particulars	Cost (₹)	Profit (₹)	Total (₹)
Opening Stock	8,02,500	–	8,02,500	Process II A/c (Transfer)*	1,58,36,000	39,59,000	1,97,95,000
Direct Material	42,80,000	–	42,80,000	Closing stock	10,70,000	–	10,70,000
Direct Wages	66,87,500	–	66,87,500				
Prime Cost	1,17,70,000	–	1,17,70,000				
Manufacturing Overheads	51,36,000	–	51,36,000				
Total cost	1,69,06,000	–	1,69,06,000				
Costing Profit and Loss A/c**		39,59,000	39,59,000				
	1,69,06,000	39,59,000	2,08,65,000		1,69,06,000	39,59,000	2,08,65,000

*Transfer price = (Total Cost - Closing Stock) (1 + 25%)

= (1,69,06,000 - 10,70,000) x 1.25

= ₹ 1,97,95,000

**Profit on transfer = (1,69,06,000 - 10,70,000) x .25 = ₹ 39,59,000

(ii) (b) Process II Account

Particulars	Cost (₹)	Profit (₹)	Total (₹)	Particulars	Cost (₹)	Profit (₹)	Total (₹)
Opening Stock	12,30,500	2,14,000	14,44,500	By Process III A/c (Transfer)**	2,86,96,274	1,20,97,476	4,07,93,750
Process I A/c	1,58,36,000	39,59,000	1,97,95,000	Closing stock*	14,77,726	2,34,274	17,12,000
Direct Material	34,77,500	-	34,77,500				
Direct Wages	57,78,000	-	57,78,000				
Prime Cost	2,63,22,000	41,73,000	3,04,95,000				
Manufacturing Overheads	38,52,000	-	38,52,000				
Total cost	3,01,74,000	41,73,000	3,43,47,000				
Costing Profit and Loss A/c***	-	81,58,750	81,58,750				
	3,01,74,000	1,23,31,750	4,25,05,750		3,01,74,000	1,23,31,750	4,25,05,750

* Cost of Closing Stock = $\left(\frac{₹\ 2,63,22,000}{₹\ 3,04,95,000}\right)$ X ₹ 17,12,000 = ₹ 14,77,726

**Transfer price = (Total Cost - Closing Stock) (1 + 25%)

= (3,43,47,000 - 17,12,000) x 1.25 = ₹ 4,07,93,750

***Profit on transfer = (3,43,47,000 - 17,12,000) x .25 = ₹ 81,58,750

(iii) (d) Process III Account

Particulars	Cost (₹)	Profit (₹)	Total (₹)	Particulars	Cost (₹)	Profit (₹)	Total (₹)
Opening Stock	16,05,000	5,35,000	21,40,000	By Finished Stock A/c** (Transfer)	3,98,91,140	2,94,44,860	6,93,36,000
Process II A/c	2,86,96,274	1,20,97,476	4,07,93,750	Closing stock*	15,64,884	5,21,616	20,86,500
Direct Material	26,75,000	--	26,75,000				
Direct Wages	49,22,000	--	49,22,000				
Prime Cost	3,78,98,274	1,26,32,476	5,05,30,750				
Manufactur-ing Overheads	35,57,750	--	35,57,750				
Total cost	4,14,56,024	1,26,32,476	5,40,88,500				
Costing Profit and Loss A/c***	-	1,73,34,000	1,73,34,000				
	4,14,56,024	2,99,66,476	7,14,22,500		4,14,56,024	2,99,66,476	7,14,22,500

* Cost of Closing Stock = $\left(\frac{₹\ 3,78,98,274}{₹\ 5,05,30,750}\right)$ X ₹ 20,86,500

= ₹ 15,64,884

**Transfer price = (Total Cost - Closing Stock) (1 + 33 1/3%)

= (5,40,88,500 - 20,86,500) x (1 + 33 1/3%)

= ₹ 6,93,36,000

***Profit on transfer = (5,40,88,500 - 20,86,500) x 33 1/3%

= ₹ 1,73,34,000

(iv) (b) Refer part (iii) above.

(v) (b) Refer part (iii) above.

3. (a) Calculation of existing labour cost per unit (time basis)

Normal weekly hours = 5 days x 8 hours = 40 hours

Night shift hours = 3 nights x 3 hours = 9 hours

Average production per week = 120 units

Weekly wages:

Normal shift	(40 hours × ₹ 320)	₹ 12,800
Night shift	(9 hours × ₹ 450)	₹ 4,050
Total wages		₹ 16,850

Labour cost per unit = $\left(\frac{₹\ 16,850}{120\ units}\right)$

= ₹ 140.42

Calculation of amended labour cost per unit (piece basis)

15 units are produced in 5 hours

Therefore, to produce 135 units, hours required is $\left(\frac{5\ hours}{15\ units}\right)$ X 135 units = 45 hours.

Labour cost of producing 135 units:

At basic time rate (45 hours × ₹ 320) = ₹ 14,400

Add: Bonus @ 15% on basic Piece rate

$\left[\left(\frac{₹\ 14,400}{135\ units}\right) \times 15\%\right] \times 135\ units$ = ₹ 2,160

Earning for the week ₹ 16,560

Labour cost per unit = $\left(\frac{₹\ 16,560}{135\ units}\right)$

= ₹ 122.67

4. (d) Computation of Comprehensive Machine Hour Rate

Particulars	**Amount for six months (₹)**
Operators' wages paid [(9,594 hrs./ 8 hrs.) x ₹ 110]	1,31,918
Power consumed	60,125
Supervision and indirect labour	21,450
Insurance (₹ 4,68,000/2)	2,34,000
Sundry expenses (₹ 7,15,000/2)	3,57,500
Depreciation {(₹ 41,60,000 × 10%)/2}	2,08,000
Repair and maintenance {(5% × ₹ 41,60,000)/2}	1,04,000
Total Overheads for 6 months	**11,16,993**
Comprehensive Machine Hour Rate = $\left(\frac{₹\ 11,16,993}{9,360\ hours}\right)$	**119.34**

5. (a) Statement of Cost for the month of March

Particulars	**Amount (₹)**	**Amount (₹)**
Cost of Material Consumed:		
Raw materials purchased	10,40,000**	
Add: Opening stock of raw materials	6,50,000	
Less: Closing stock of raw materials	(1,95,000)	14,95,000
Direct Wages		11,44,000

Prime Cost		26,39,000*
Hire charges paid for Plant (indirect expenses)	3,24,740	
Factory overheads (20% of Prime cost)	5,27,800	8,52,540
Works/ Factory Cost		34,91,540
Less: Realisable value on sale of scrap		(32,500)
Cost of Production/ Cost of Goods Sold		34,59,040
Administrative overheads:		
Maintenance of office building	13,000	
Salary paid to Office staff	1,78,750	1,91,750
Distribution overheads:		
Depreciation on delivery van	39,000	
Warehousing charges	61,750	1,00,750
Cost of Sales		37,51,540

(Reverse calculation to be done to find out the value of Raw materials purchased)

* Prime Cost + 3,24,740 + 20% of Prime Cost = 34,91,540

1.2 Prime Cost = 34,91,540 - 3,24,740 = 31,66,800

Prime Cost = 26,39,000

** Raw materials purchased = 14,95,000 - 6,50,000 + 1,95,000

= 10,40,000

6. (b) Calculation of total production of BetaTab, Folick and TegriCap

Products	Quantity sold (tons)	Quantity of closing inventories (tons)	Total production
(1)	(2)	(3)	(4) = [(2) + (3)]
BetaTab	372	360	732
Folick	1,054	120	1,174
TegriCap	1,472	50	1,522

Calculation of Net Realisable Value (at split-off point)

	Products			Total (₹)
	BetaTab	**Folick**	**TegriCap**	
Total Production (tons) (A)	732	1,174	1,522	
Selling price per ton (₹) (B)	7,500	5,625	3,750	
Final sales value of total production (₹) [(A) x (B)]	54,90,000	66,03,750	57,07,500	1,78,01,250
Less: Additional cost (₹)	-	-	(31,00,000)	(31,00,000)
Net realisable value (₹) (at split-off point)	54,90,000	66,03,750	26,07,500	1,47,01,250

Joint cost allocated using Net Realisable Value (at split-off point):

$$\frac{\text{Total Joint cost}}{\text{Total Net Realisable Value}} \times \text{Net Realisable Value of each product}$$

BetaTab $= \left(\frac{₹\ 62,50,000}{₹\ 1,47,01,250}\right)$ x ₹ 54,90,000

= ₹ 23,33,985

Folick $= \left(\frac{₹\ 62,50,000}{₹\ 1,47,01,250}\right)$ x ₹ 66,03,750

= ₹ 28,07,478

TegriCap $= \left(\frac{₹\ 62,50,000}{₹\ 1,47,01,250}\right)$ x ₹ 26,07,500

= ₹ 11,08,537

7. (b) Variable cost per unit $= \frac{\text{Change in Total cost}}{\text{Change in units}}$

$$= \left(\frac{(₹\ 11 \times 20,000 \text{ units}) - (₹\ 11.25 \times 16,000 \text{ units})}{20,000 \text{ units} - 16,000 \text{ units}}\right)$$

$$= \left(\frac{₹\ 2,20,000 - ₹\ 1,80,000}{4,000 \text{ units}}\right) = ₹\ 10$$

Fixed cost = Total Cost – Variable cost (at 20,000 units level)

= (₹ 11 x 20,000 units) – (₹ 10 x 20,000 units)

= ₹ 20,000

(i) Break-even Point (in units) $= \left(\frac{\text{Fixed Costs}}{\text{Contribution per unit*}}\right)$

$= \left(\frac{₹\ 20,000}{₹\ 3.333}\right)$

= **6,000 units**

* Contribution is the excess of sales revenue over the variable costs.

(ii) Cash Break-even Point (in units) $= \left(\frac{\text{Cash Fixed Costs**}}{\text{Contribution per unit}}\right)$

$= \left(\frac{₹\ 20,000 - ₹\ 5,000}{₹\ 3.333}\right)$

= **4,500 units**

** depreciation and other non-cash fixed costs are excluded from the fixed costs to compute cash break-even point.

(ii) P/V Ratio $= \frac{\text{Contribution per unit}}{\text{Sale price per unit}}$

$= \left(\frac{₹\ 3.333}{₹\ 10 + ₹\ 3.333}\right)$

= **25%**

8. Annual demand of material 'EXE'

= 16,000 units (per quarter) x 4 (No. of Quarter in a year) x 6 kg. (for every finished product)

= 3,84,000 kg.

(i) Calculation of Economic Order Quantity (EOQ) for material 'EXE'

$$EOQ = \sqrt{\frac{2 \times \text{Annual demand} \times \text{ordering cost}}{\text{Carrying cost per unit per annum}}}$$

$$= \sqrt{\frac{2 \times 3,84,000\text{kg.} \times ₹\ 2,000}{₹40 \times 15\%}} = 16,000 \text{ kg.}$$

(ii) Evaluation of Cost under different options of 'order quantity'.

Particulars	**When EOQ is ordered**	**When discount of 2.5% is accepted and supply is in 4 equal installments**
Order size	16,000 kg.	96,000 kg. $= \frac{3,84,000 \text{ kg.}}{4}$
No. of orders	24 $= \frac{3,84,000 \text{ kg.}}{16,000 \text{ kg.}}$	4
Purchase Cost per kg.	₹ 40	₹ 39 {₹ 40 - (₹ 40 × 2.5%)}
Total Purchase Cost (A)	₹ 1,53,60,000 (3,84,000 kg. x ₹ 40)	₹ 1,49,76,000 (3,84,000 kg. x ₹ 39)
Ordering Cost (B)	₹ 48,000 (24 orders x ₹ 2,000)	₹ 8,000 (4 orders x ₹ 2,000)
Carrying Cost (C)	₹ 48,000 $= \frac{16,000 \text{ kg.}}{2}$ x 15% x ₹ 40	₹ 2,80,800 $= \frac{96,000 \text{ kg.}}{2}$ x 15% x ₹ 39
Total Cost (A + B + C)	**₹ 1,54,56,000**	**₹ 1,52,64,800**

COMMENT – The total cost is lower if Ani Ltd. accept an offer of 2.5% discount by the supplier, when supply of the annual requirement of material 'EXE' is made in 4 equal installments.

9.

Particulars	**'Cee'**	**'Dee'**
No. of binding work assigned (units)	21	30
Hour allowed per magazine (Hours)	8	8
Total hours allowed (Hours)	168	240
Hours Taken (Hours)	78	114
Hours Saved (Hours)	90	126

(i) Calculation of loss incurred due to incorrect rate selection

(While calculating loss only excess rate per hour has been taken)

Particulars	'Cee' (₹)	'Dee' (₹)	Total (₹)
Basic Wages	390 (78 Hrs. ×₹ 5)	570 (114 Hrs. × ₹ 5)	960
Bonus (as per Halsey Scheme) (50% of Time Saved × Excess Rate)	225 (50% of 90 Hrs. × ₹ 5)	315 (50% of 126 Hrs. × ₹ 5)	540
Excess Wages Paid	**615**	**885**	**1,500**

(ii) Amount of loss if Rowan scheme of bonus payment were followed

Particulars	'Cee' (₹)	'Dee' (₹)	Total (₹)
Basic Wages	390.00 (78 Hrs. × ₹ 5)	570.00 (114 Hrs. × ₹ 5)	960.00
Bonus (as per Rowan Scheme) $(\frac{\text{Time Taken}}{\text{Time Allowed}} \times \text{Time Saved x Excess Rate})$	208.93 $=(\frac{78}{168} \times 90 \times ₹\ 5)$	299.25 $=(\frac{114}{240} \times 126 \times ₹\ 5)$	508.18
Excess Wages Paid	**598.93**	**869.25**	**1,468.18**

(iii) Calculation of amount that could have been saved if Rowan Scheme were followed

Particulars	'Cee' (₹)	'Dee' (₹)	Total (₹)
Wages paid under Halsey Scheme	615.00	885.00	1,500.00
Wages paid under Rowan Scheme	598.93	869.25	1,468.18
Difference (Savings)	**16.07**	**15.75**	**31.82**

10. Profitability statement of each product for the year ended 31st March

Particulars	Total (₹)	Products		
		A (₹)	B (₹)	C (₹)
Sales	2,04,00,000	60,00,000	90,00,000	54,00,000
Variable Costs:				
Cost of sales	1,35,00,000	30,00,000	78,00,000	27,00,000
Commission @ 2.40% of sales	4,89,600	1,44,000	2,16,000	1,29,600
Packaging wages and materials @ ₹ 4.80 per parcel	36,00,000	11,52,000	14,40,000	10,08,000
Stationery @ ₹ 1.80 per invoice	5,29,200	1,08,000	1,62,000	2,59,200
Total Variable Costs	1,81,18,800	44,04,000	96,18,000	40,96,800
Contribution (sales - variable cost)	22,81,200	15,96,000	(6,18,000)	13,03,200
Fixed costs:				
Rent and insurance	6,00,000	2,00,000	3,00,000	1,00,000
Depreciation	2,70,000	86,400	1,08,000	75,600
Salesman's salary and expenses	11,40,000	3,35,294	5,02,941	3,01,765
Administrative wages and salaries	9,00,000	1,83,674	2,75,510	4,40,816
Total Fixed Costs	29,10,000	8,05,368	11,86,451	9,18,181
Profit or loss (Contribution – Fixed costs)	(6,28,800)	7,90,632	(18,04,451)	3,85,019
Percentage of profit or loss on sales (%)	(3.08)%	13.18%	(20.05)%	7.13%

Recommendation of finance manager is not correct. Product 'C' should not be discontinued as it is profitable.

11. Preparation of Cost Sheet for 'silicon' phone covers

No. of units produced = 1,00,000 units

No. of units sold = 90,000 units

Particulars	**Per unit (₹)**	**Total (₹)**
Direct Materials (Working note- (i))	40.00	40,00,000
Direct Wages (Working note- (ii))	20.00	20,00,000
Prime Cost	60.00	60,00,000
Production Overhead (Working note- (iii))	8.00	8,00,000
Factory Cost	68.00	68,00,000
Administration Overhead (50% of Production Overhead)	4.00	4,00,000
Cost of Production	72.00	72,00,000
Less: Closing stock (1,00,000 units – 90,000 units)	-	(7,20,000)
Cost of Goods Sold i.e. 90,000 units	72.00	64,80,000
Selling cost	8.00	7,20,000
Cost of Sales/ Total Cost	**80.00**	**72,00,000**
Profit	**60.00**	**54,00,000**
Sales Value (₹ 140 × 90,000 units)	140.00	1,26,00,000

Working Notes:

(i) Direct material cost per unit of 'plastic' phone cover = M

Direct material cost per unit of 'silicon' phone cover = 2M

Total Direct Material Cost = 2M × 1,00,000 units + M × 3,00,000 units

Or, ₹ 1,00,00,000 = 2,00,000 M + 3,00,000 M

Or, M $= \frac{₹\ 1,00,00,000}{5,00,000} = ₹\ 20$

Therefore, Direct material Cost per unit of 'silicon' phone cover = 2 × ₹ 20 = ₹ 40

(ii) Direct wages per unit for 'silicon' phone cover = W

Direct wages per unit for 'plastic' phone cover = 0.6W

So, (W x 100,000) + (0.6W x 3,00,000) = ₹ 56,00,000

Or, 1,00,000 W + 1,80,000 W = ₹ 56,00,000

Or, W $= \frac{₹\ 56,00,000}{2,80,000} = ₹\ 20$ per unit

Therefore, Direct wages per unit of 'silicon' phone cover = ₹ 20

(iii) Production overhead per unit = $\frac{₹\ 32,00,000}{(1,00,000 + 3,00,000)} = ₹\ 8$

Production overhead for 'silicon' phone cover = ₹ 8 × 1,00,000 units = ₹ 8,00,000

12. Statement of Reconciliation

(Reconciling the profit as per costing records with the profit as per financial records)

Particulars	**(₹)**	**(₹)**
Net Profit as per Cost Accounts		57,71,840
Add: Under valuation of closing stock in cost accounts	1,64,000	
Rent received credited in financial accounts	87,200	2,51,200
		60,23,040
Less: Under recovery of selling overheads in cost accounts	1,16,800	
Bad debts provided in financial accounts	52,000	

Income tax provided in financial accounts	2,54,400	
Under recovery of administration overheads in cost accounts	1,50,400	5,73,600
Profit as per Financial Accounts		**54,49,440**

13. Statement of Cost and Profit per unit of each batch order

	October	November	December	Total
a) Batch Output (Nos.)	2,500	3,000	2,000	7,500
b) Sales Value (@ ₹ 15 per unit)	(₹) 37,500	(₹) 45,000	(₹) 30,000	(₹) 1,12,500
Cost				
Material	12,500	18,000	10,000	40,500
Wages	5,000	6,000	4,000	15,000
Overheads (working note)	7,500	6,000	6,000	19,500
c) Total	25,000	30,000	20,000	75,000
d) Profit per batch (b) – (c)	12,500	15,000	10,000	37,500
e) Cost per unit (c) ÷ (a)	**10**	**10**	**10**	
f) Profit per unit (d) ÷ (a)	**5**	**5**	**5**	

Overall Position of the Order for 6,000 Units

Particulars	Amount (₹)
Sales value (6,000 units × ₹ 15)	90,000
Less: Total cost (6,000 units × ₹ 10)	60,000
Profit	30,000

Working Note:

Calculation of overhead per hour

Particulars	October	November	December
i. Labour hours:			
= Labour cost / Labour rates per hour	₹ 5,000 / 2 = 2,500 hrs.	₹ 6,000 / 2 = 3,000 hrs.	₹ 4,000 / 2 = 2,000 hrs.
ii. Overhead per hour:			
= Total Overheads / Total labour hour	₹ 24,000 / 8,000 hrs. = ₹ 3	₹ 18,000 / 9,000 hrs. = ₹ 2	₹ 30,000 / 10,000 hrs. = ₹ 3
iii. Overhead for the batch (i) × (ii)	₹ 7,500	₹ 6,000	₹ 6,000

14. Workings -

1. Product C is produced incidentally from the material used in the manufacture of A and B, thus, Product C is a By-product.

	Per unit (₹)
Selling price after further processing (per kg.) (₹)	24
Less: Further Processing Cost (per kg)	8
Further Marketing Cost (per kg)	4
	12

Calculation of Joint Cost to be borne by By-product C

Joint Costs to be borne by By-product C = Output (kg.) x ₹ **12**

= 1,625 kg. × ₹ 12

= ₹ 19,500

2. Allocation of joint cost among joint products (on the basis of physical units) (given)

Product A: (₹ 14,82,000 - ₹ 19,500) x $\left(\frac{16,250}{24,375}\right)$ = **₹ 9,75,000**

Product B: (₹ 14,82,000 - ₹ 19,500) x $\left(\frac{8,125}{24,375}\right)$= **₹ 4,87,500**

(i) Statement of Profit/ (Loss) if joint products are sold without processing

Particulars	Product A	Product B	Total
(a) Output (kg.)	16,250	8,125	
(b) Selling price at the split-off point (per kg.) (₹)	72	80	
(c) Sales Value (a) x (b)	11,70,000	6,50,000	18,20,000
(d) Allocation of joint costs	9,75,000	4,87,500	14,62,500
(e) Profit at the point of separation (c)-(d)	**1,95,000**	**1,62,500**	**3,57,500**

(ii) Further processing decision

Particulars	Product A (₹)	Product B (₹)
(a) Selling price at split off	72	80
(b) Selling price after further processing	112	104
(c) Incremental revenue (b)-(a)	40	24
(d) Further processing cost	16	20
(e) Further Marketing Cost	8	8
(f) Incremental cost (d)+(e)	24	28
(g) Incremental profit/ (loss) per kg (c)-(f)	**16**	**(4)**
(h) Total Incremental profit/ (loss)	**₹ 16 x 16,250 kg**	**(₹ 4) x 8,125 kg**
	₹ 2,60,000	**(₹ 32,500)**

Therefore, Product A should be processed further as they give incremental profit. On the other hand, Product B should be sold at

split-off point as they suffer incremental losses after further processing.

15. (i) Statement of Expenses of operating a single bus for a year

Particulars		Rate (₹)	Per Bus per annum (₹)
(A)	**Standing Charges:**		
	Driver and attendant salary	60,000 p.m	7,20,000
	Average Cleaner's salary (50%)	30,000 p.m	1,80,000
	Insurance charge	60,000 p.a.	60,000
	License fee, taxes etc.	10,160 p.m.	121,920
	Average Parking Charges	36,000 p.m	72,000
	Depreciation {(30,00,000 – 6,00,000) ÷ 8}	3,00,000 p.a.	3,00,000
(B)	**Maintenance Charges:**		
	Repairs & maintenance including engine oil and lubricants (Working Note 1)	5,7120 p.a.	5,7120
(C)	**Operating Charges:**		
	Diesel (Working Note 2)		11,52,000
	Total Cost (A + B + C)		26,63,040
	Cost per month		2,21,920

(ii) Average cost per students per month:

A. Student coming from distance of up-to 10 km

$$= \frac{\text{Total cost per month}}{\text{Total no. of equivalent student}} = \frac{₹\ 2,21,920}{72^*} = ₹\ 3,082.22$$

B. Student coming from a distance beyond 10 km

= ₹ 3,082.22 × 2 = ₹ 6,164.44

*** Considering half fare students as a base**

Full fare students (12 × 2)	24 students
Add: Half fare students (Working Note 3)	12 students
Total Equivalent number of students per month	36 students
Total Equivalent number of students per month (morning + afternoon shift)	72 students

Working Notes:

1. Calculation of Repairs and maintenance cost of a bus:

Distance travelled in a year:

(4 trips × 2 × 20 km. × 30 days × 12 months)

Distance travelled p.a.: 57,600 km.

Repairs and maintenance cost per Bus per annum:

$$= \frac{57,600 \text{ km.}}{5,760 \text{ km}} \times ₹ 5,712 \text{ per bus}$$

= ₹ 57,120 per annum

2. Calculation of diesel cost per bus per annum:

Distance travelled in a year = 57,600 km

Diesel cost per Bus per annum:

$$= \frac{57,600 \text{ km.}}{8 \text{ Km}} \times ₹ 160$$

= ₹ 11,52,000

3. Calculation of equivalent number of students per bus:

Seating capacity of a bus	30 students
Occupancy (80% of capacity)	24 students
Half fare students (50% of 24 students)	12 students
Full fare students (50% of 24 students)	12 students

16. (i)

Material	SQ* × SP (₹)	AQ** × SP (₹)	AQ** × AP (₹)	RSQ*** × SP (₹)
A	27,50,000	33,00,000	34,50,000	26,24,600
	(25,000 kg. × ₹ 110)	(30,000 kg. × ₹ 110)	(30,000 kg. × ₹ 115)	(23,860 kg. × ₹ 110)
B	48,00,000	40,00,000	41,25,000	45,82,400
	(15,000 kg. × ₹ 320)	(12,500 kg. × ₹ 320)	(12,500 kg. × ₹ 320)	(14,320 kg. × ₹ 320)
C	69,00,000	46,00,000	40,50,000	65,87,200
	(15,000 kg. × ₹ 460)	(10,000 kg. × ₹ 460)	(10,000 kg. × ₹ 405)	(14,320 kg. × ₹ 460)
Total	1,44,50,000	1,19,00,000	1,16,25,000	1,37,94,200

** Standard Quantity of materials for actual output :*

A	$= \frac{50 \text{ kgs.}}{100 \text{ kgs}} \times 50{,}000 \text{ kgs.} = 25{,}000 \text{ kgs.}$
B	$= \frac{30 \text{ kgs.}}{100 \text{ kgs}} \times 50{,}000 \text{ kgs.} = 15{,}000 \text{ kgs.}$
C	$= \frac{30 \text{ kgs.}}{100 \text{ kgs}} \times 50{,}000 \text{ kgs.} = 15{,}000 \text{ kgs.}$

*** Actual Quantity of Material used for actual output:*

A	$= \frac{60 \text{ kgs.}}{100 \text{ kgs}} \times 50{,}000 \text{ kgs.} = 30{,}000 \text{ kgs.}$
B	$= \frac{25 \text{ kgs.}}{100 \text{ kgs}} \times 50{,}000 \text{ kgs.} = 12{,}500 \text{ kgs.}$
C	$= \frac{20 \text{ kgs.}}{100 \text{ kgs}} \times 50{,}000 \text{ kgs.} = 10{,}000 \text{ kgs.}$

****Revised Standard Quantity (RSQ):*

A	$= \frac{50 \text{ kgs.}}{110 \text{ kgs}} \times 52,500 \text{ kgs.} = 23,860 \text{ kgs.}$
B	$= \frac{30 \text{ kgs.}}{110 \text{ kgs}} \times 52,500 \text{ kgs.} = 14,320 \text{ kgs.}$
C	$= \frac{30 \text{ kgs.}}{110 \text{ kgs}} \times 52,500 \text{ kgs.} = 14,320 \text{ kgs.}$

(i) Material Cost Variance = (Std. Qty. × Std. Price) – (Actual Qty. × Actual Price)

Or = (SQ × SP) – (AQ × AP)

A	= ₹ 27,50,000 - ₹ 34,50,000	= ₹ 7,00,000 (A)
B	= ₹ 48,00,000 - ₹ 41,25,000	= ₹ 6,75,000 (F)
C	= ₹ 69,00,000 - ₹ 40,50,000	= ₹ 28,50,000 (F)
		= ₹ 28,25,000 (F)

(ii) Material Price Variance = Actual Quantity (Std. Price – Actual Price)

= (AQ × SP) – (AQ × AP)

A	= ₹ 33,00,000 - ₹ 34,50,000	= ₹ 1,50,000 (A)
B	= ₹ 40,00,000 - ₹ 41,25,000	= ₹ 1,25,000 (A)
C	= ₹ 46,00,000 - ₹ 40,50,000	= ₹ 5,50,000 (F)
		= ₹ 2,75,000 (F)

(iii) Material Usage Variance = Std. Price (Std. Qty. – Actual Qty.)

Or = (SQ × SP) – (AQ × SP)

A	= ₹ 27,50,000 - ₹ 33,00,000	= ₹ 5,50,000 (A)
B	= ₹ 48,00,000 - ₹ 40,00,000	= ₹ 8,00,000 (F)
C	= ₹ 69,00,000 - ₹ 46,00,000	= ₹ 23,00,000 (F)
		= ₹ 25,50,000 (F)

(iv) Material Mix Variance = Std. Price (Revised Std. Qty. – Actual Qty.)

Or = (RSQ × SP) – (AQ × SP)

A	= ₹ 26,24,600 - ₹ 33,00,000	= ₹ 6,75,400 (A)
B	= ₹ 45,82,400 - ₹ 40,00,000	= ₹ 5,82,400 (F)
C	= ₹ 65,87,200 - ₹ 46,00,000	= ₹ 19,87,200 (F)
		= ₹ 18,94,200 (F)

(v) Material Yield Variance = Std. Price (Std. Qty. – Revised Std. Qty.)

Or = (SQ × SP) – (RSQ × SP)

A	= ₹ 27,50,000 - ₹ 26,24,600	= ₹ 1,25,400 (F)
B	= ₹ 48,00,000 - ₹ 45,82,400	= ₹ 2,17,600 (F)
C	= ₹ 69,00,000 - ₹ 65,87,200	= ₹ 3,12,800 (F)
		= ₹ 6,55,800 (F)

17. Statement of Minimum Price Which the Company Can Afford to Quote for the New Customer

	(₹)	(₹)
Cost to be incurred to bring the machine in its original condition		3,70,000
Direct Material (Replacement Value)		1,50,000
Direct Wages		
Dept. X: (35 men days × ₹ 1,000)	35,000	
Dept. Y: (55 men days × ₹ 1,200)	66,000	
Opportunity Cost of Contribution Lost by Dept. Y (₹66,000 × ₹3)	1,98,000	2,99,000
Variable Overheads [30%×(₹35,000+₹ 66,000)]		30,300
Delivery Costs		15,500
Additional Supervisory required *for modification*		80,000
Saving Due to Alternative Use of AI Device		

Bought Out Price	1,05,000	
Less: Dismantling & Removal Cost (5 men day × ₹1,000)	5,000	
Less: Variable Cost (30% × ₹ 5,000)	1,500	(98,500)
Net Loss on Material Cost Savings (W.N.)		1,93,500
Opportunity Cost of Remaining Materials which can be sold as scrap		1,50,000
Opportunity Cost of Sale of Drawings		45,000
Total Minimum Price which may be quoted		12,34,800

Working Note

	(₹)
Loss on Material Cost Saving of Machine	2,00,000
Less: Conversion Cost (5 men days × ₹1,000)	5,000
Less: Variable Cost (30% × ₹5,000)	1,500
Net Loss on Material Cost Saving of Machine	1,93,500

18. Flexible Budget of BT Ltd.

Particulars	**75% (₹)**	**85% (₹)**	**100% (₹)**	**115% (₹)**
Sales	73,12,500	82,87,500	97,50,000	1,12,12,500
COGS (40% of Sales)	29,25,000	33,15,000	39,00,000	44,85,000
Administration Costs:				
Office Salaries (fixed)	11,70,000	11,70,000	11,70,000	11,70,000
General expenses (5% of COGS)	1,46,250	1,65,750	1,95,000	2,24,250
Depreciation (fixed)	97,500	97,500	97,500	97,500
Rent and rates (fixed)	1,13,750	1,13,750	1,13,750	1,13,750

(A) Total Adm. Costs	15,27,500	15,47,000	15,76,250	16,05,500
Selling Costs:				
Salaries (8% of sales)	5,85,000	6,63,000	7,80,000	8,97,000
Travelling expenses (5% of COGS)	1,46,250	1,65,750	1,95,000	2,24,250
Sales office (2.5% of COGS)	73,125	82,875	97,500	1,12,125
General expenses (2.5% of COGS)	73,125	82,875	97,500	1,12,125
(B) Total Selling Costs	8,77,500	9,94,500	11,70,000	13,45,500
Distribution Costs:				
Wages (fixed)	195,000	195,000	195,000	195,000
Rent (1% of sales)	73,125	82,875	97,500	1,12,125
Other expenses (10% of COGS)	2,92,500	3,31,500	3,90,000	4,48,500
(C) Total Distribution Costs	5,60,625	6,09,375	6,82,500	7,55,625
Total Costs (A + B + C)	**29,65,625**	**31,50,875**	**34,28,750**	**37,06,625**

19. (a) Advantages of Marginal Costing:

1. **Simplified Pricing Policy:** The marginal cost remains constant per unit of output whereas the fixed cost remains constant in total. Since marginal cost per unit is constant from period to period within a short span of time, firm decisions on pricing policy can be taken.

2. **Proper recovery of Overheads:** Overheads are recovered in costing on the basis of pre-determined rates. If fixed overheads are included on the basis of pre-determined rates, there will be under- recovery of overheads if production is less or if overheads are more. There will be over- recovery of overheads if production is more than the budget or actual

expenses are less than the estimate. This creates the problem of treatment of such under or over-recovery of overheads. Marginal costing avoids such under or over recovery of overheads.

3. **Shows Realistic Profit:** Advocates of marginal costing argues that under the marginal costing technique, the stock of finished goods and work-in-progress are carried on marginal cost basis and the fixed expenses are written off to profit and loss account as period cost. This shows the true profit of the period.

4. **How much to produce:** Marginal costing helps in the preparation of break-even analysis which shows the effect of increasing or decreasing production activity on the profitability of the company.

5. **More control over expenditure:** Segregation of expenses as fixed and variable helps the management to exercise control over expenditure. The management can compare the actual variable expenses with the budgeted variable expenses and take corrective action through analysis of variances.

6. **Helps in Decision Making:** Marginal costing helps the management in taking a number of business decisions like make or buy, discontinuance of a particular product, replacement of machines, etc.

7. **Short term profit planning:** It helps in short term profit planning by B.E.P charts.

(b) Items included in Financial Accounts only-

(A) Purely Financial Expenses:

(i) Interest on loans or bank mortgages

(ii) Expenses and discounts on issue of shares, debentures etc.

(iii) Other capital losses i.e., loss by fire not covered by insurance etc.

(iv) Losses on the sales of fixed assets and investments

(v) Income tax, donations, subscriptions

(vi) Expenses of the company's share transfer office, if any.

(B) Purely Financial Income

(i) Interest received on bank deposits, loans and investments

(ii) Dividends received

(iii) Profits on the sale of fixed assets and investments

(iv) Transfer fee received

(v) Rent receivables.

(c) By-product cost, when they are of small total value, can be dealt in cost accounting in the following ways:

When the by-products are of small total value, the amount realised from their sale may be dealt in any one the following two ways:

1. The sales value of the by-products may be **credited to the Costing Profit and Loss Account** and no credit be given in the Cost Accounts. The credit to the Costing Profit and Loss Account here is treated either as miscellaneous income or as additional sales revenue.

2. The sale proceeds of the by-product may be **treated as deductions from the total costs**. The sale proceeds in fact should be deducted either from the production cost or from the cost of sales.

(d) There are two types of material losses viz. (i) Normal loss and (ii) Abnormal loss.

(i) Normal Process Loss: It is also known as normal wastage. It is defined as **the loss of material which is inherent in the nature** of work. Such a loss can be reasonably anticipated from the nature of the material, nature of operation, the experience and technical data. It is unavoidable because of nature of the material or the process. It also includes units

withdrawn from the process for test or sampling.

Treatment in Cost Accounts: The cost of **normal process loss in practice is absorbed by good units produced** under the process. The amount realised by the sale of normal process loss units should be credited to the process account.

(ii) **Abnormal Process Loss*:*** It is also known as abnormal wastage. It is defined as the **loss in excess of the pre-determined loss** (Normal process loss). This type of loss may occur due to the carelessness of workers, a bad plant design or operation, sabotage etc. Such a loss cannot obviously be estimated in advance. But it can be kept under control by taking suitable measures.

Treatment in Cost Accounts: The cost of an abnormal process loss unit is equal to the cost of a good unit. The total cost of abnormal process loss is credited to the process account from which it arises. Cost of abnormal process loss is not treated as a part of the cost of the product. In fact, **the total cost of abnormal process loss is debited to costing profit and loss account.**

PAPER – 5:
AUDITING AND ETHICS

QUESTIONS

PART – I: Multiple Choice Questions based on Case Scenarios

Case Scenario

Joy Ltd., a company engaged in the business of trekking essentials, appointed CA Raj as the Statutory Auditor for the year. Due to the large volume of transactions of the company, the audit engagement team of CA Raj realized that it would not be feasible to audit each transaction separately during the financial year under audit. Therefore, Engagement Partner decided to apply following audit sampling techniques:

- Random number tables were used for selection of sample for power, telephone, and fuel charges.
- No structured method of sampling was used for office stationery.
- Transactions exceeding ₹ 8,000 were selected for travel expenses.
- The first 200 sales invoices from the sales book for the month of July were selected for sales.

Mr. Suresh, one of the team members, compared the salary expenses incurred by the company during the current year with those of the previous five years. He noticed a significant percentage increase in the expenses. This unusual increase raised doubts in his mind. He decided to compare such an increase in salary expenses with the increase in the number of employees.

The company is having warehouse at 2 locations. CA Raj is planning to attend the physical inventory count process. The inventory includes finished products

such as trekking jackets, bags, shoes etc., and raw materials like leather, cloth, chemicals, etc. Some of the inventory is also held by a third party.

During a discussion among the team members regarding the sufficiency and appropriateness of audit evidence, they agreed that sufficiency is the measure of quantity of the audit evidence and appropriateness is the measure of quality of audit evidence.

Joy Ltd. operates 100 stores on rented premises across the country and is in the process of expanding. Although the rent expenses have been accounted for, the auditor requested the management to provide all active rent agreements for the year under audit for detailed examination.

Based on above, answer the following questions: -

1. Which of the sampling techniques were used for the following transactions:

   (i) Power, telephone and fuel charges;

   (ii) Office Stationery;

   (iii) Travel expenses; and

   (iv) Sales.

   (Answer in the given order)

   (a) Random sampling, Systematic sampling, Monetary unit sampling, Block sampling.

   (b) Systematic sampling, Random sampling, Block sampling, Haphazard sampling.

   (c) Random sampling, Haphazard sampling, Monetary unit sampling and Block sampling.

   (d) Random sampling, Haphazard sampling, Monetary unit sampling and Systematic sampling.

2. Which audit procedure was Mr. Suresh intended to perform by comparing salary expenses?

   (a) Test of details.

   (b) Test of balances.

(c) Test of control.

(d) Substantive analytical procedure.

3. Which of the following is not part of CA Raj's responsibility with respect to the inventories held by the third parties?

(a) CA Raj should request confirmation from the third party regarding the quantity and condition of the inventory held by them.

(b) CA Raj should perform an independent valuation of the inventory based solely on the company's internal records.

(c) CA Raj should request the third party to allow him to physically inspect the inventories held by them.

(d) CA Raj should review the terms of the agreement between the company and the third party to understand the responsibilities related to inventory management.

4. Which audit procedure was used by CA Raj while collecting all rent agreements?

(a) Inspection.

(b) Analytical procedure.

(c) Reperformance.

(d) Observation.

5. In the given case, the audit team of CA Raj discusses the sufficiency and appropriateness of audit evidence. In the context of Joy Ltd.'s audit, the team was considering various factors affecting the sufficiency of the evidence they gathered for large-volume transactions. Which of the following is not a factor that would influence the auditor's judgment on the sufficiency of audit evidence?

(a) Materiality of the transactions.

(b) Risk of material misstatement in the financial statements.

(c) Size and characteristics of the population being audited.

(d) The type of products Joy Ltd. manufactures (trekking essentials).

General MCQs

6. CA Sumit, during the process of assembling the audit file after the completion of the audit, briefed his team on the changes to be made in the audit documentation. Which of the following changes can be made during the audit file assembly stage?

   A. Sorting, collating and cross referencing of working papers.

   B. Deleting or discarding superseded documents.

   C. Recalculation of depreciation.

   D. Recalculation of Interest on loans.

   E. Signing off of completion checklist relating to file assembly.

   (a) A, B and E

   (b) C and D

   (c) A, C and D

   (d) A, C, D and E

7. CA Rao is conducting an audit for ABC Ltd., a large client. He is informed by the client's CFO that if they report certain deficiencies, the auditor's firm may not be considered for future engagements. Which type of threat does this scenario represent?

   (a) Familiarity Threat

   (b) Intimidation Threat

   (c) Self-interest Threat

   (d) Advocacy Threat

8. CA Kaushal, the statutory auditor of Femo Ltd., obtained trade receivables ageing report, analysed it and identified doubtful debts during the audit of accounts receivable balances. Which Balance Sheet assertion is CA Kaushal intended to check?

   (a) Valuation

   (b) Rights and obligations

   (c) Existence

(d) Completeness

PART II – Descriptive Questions

Chapter 1 - Nature, Objective and Scope of Audit

9. RST Ltd., a retail company, has set up internal controls requiring all invoices to be stamped and signed by an authorised person in "Goods Receiving Section" of the company stating the date and time of receiving goods in premises to ensure that only those purchase bills are produced for payment for which goods have been actually received.

During the audit, the auditor finds that two employees – a purchasing manager and an accounts clerk – have worked together to bypass this control, submitting fake invoices that resulted in payments for goods that were never received. You are required to state the objectives of an audit, as per SA 200, when it comes to ensuring the reliability of financial statements? Also explain, why auditor can provide only reasonable, rather than absolute, assurance that the financial statements are free from material misstatement due to fraud or error in the context of the given situation?

Chapter 2 - Audit Strategy, Audit Planning and Audit Programme

10. During the audit of ABC Ltd., a medium-sized manufacturing company, the engagement partner is responsible for directing and supervising the work of the engagement team. The team includes both experienced members and several new trainees. Additionally, certain areas of the audit have been identified as high-risk, such as revenue recognition and inventory valuation, due to recent changes in ABC Ltd.'s accounting policies. What factors should the engagement team members consider when determining the nature, timing, and extent of direction, supervision, and review of the engagement team's work?

Chapter 3 – Risk Assessment and Internal Control

11. The auditor of EFG Ltd., a company engaged in the Tours & Travel business, needs to obtain an understanding of the company's control environment. To do this, the auditor evaluates whether:

(i) Management has created and maintained a culture of honesty and ethical behaviour; and

(ii) The strengths in the control environment elements collectively provide an appropriate foundation for the other components of internal control.

What is included in control environment? Also explain the elements of control environment.

Chapter 4 – Audit Evidence

12. CA Mukul is the external auditor of Beige Ltd., a large company, engaged in the manufacturing of fast-moving consumer (FMCG) goods. After assessing the internal audit function of the company, CA Mukul decided to use the internal auditor of the company to provide direct assistance. In this context, what is meant by direct assistance under relevant Standard on Auditing? Also comment whether prior to using internal auditor for direct assistance for the purpose of audit, CA Mukul is required to obtain any written agreements or not. Give examples of procedures in which CA Mukul shall not use an internal auditor to provide direct assistance.

Chapter 5 - Audit of Items of Financial Statements

13. During the audit of Rapid Industries Private Limited, CA Akshat notices that inventories of raw materials & consumables and work-in- progress amounting ₹ 2.50 crores and ₹ 0.25 crores appear in the financial statements of the company as on March 31st, 2024. He wants to verify that the above-mentioned inventories have been valued appropriately and as per generally accepted accounting policies and practices. How should he proceed to verify the above?

Chapter 6 – Audit Documentation

14. CA Ripun completed the audit of a listed company, and the audit report was issued on July 17th, 2024. However, he had not properly organized the audit working papers, including records of discussions with management, audit procedures performed, and conclusions reached. More than six months after issuing the report, he received a letter from the regulator in connection with audit of the company requesting him to share copy of audit file. In a hurry, CA Ripun quickly assembled the audit file, adding some papers he thought were necessary, but he used the

current date on these newly added documents. He then sent the audit file to the regulator. Discuss the issues involved related to "audit documentation" and assembling of the final audit file in this case.

Chapter 7- Completion and Review

15. During the audit of a company, CA Kartik has noticed that company's turnover has fallen drastically as compared to last three years due to loss of its major markets and key customers. The company is in need of funds for new product development, but bankers are not willing to lend financial support. Which additional audit procedures need to be performed by CA Kartik in accordance with SA 570 when such events or conditions are identified?

Chapter 8 – Audit Report

16. The nature of the comparative information that is presented in an entity's financial statements depends on the requirements of the applicable financial reporting framework. There are two different broad approaches to the auditor's reporting responsibilities in respect of such comparative information: corresponding figures and comparative financial statements.

    Explain clearly the differences between the approaches stating the essential audit reporting. Also define comparative information and audit procedures regarding comparative information.

17. Kiran, a CA student, was reviewing an audit report of the company when she noticed an 18-digit alphanumeric code below the auditor's signature and membership number. She wants to understand the purpose and importance of this randomly generated number as unique code. Is this code required for audit reports only?

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

18. An NGO based in Kolkata collected significant donations for flood victims in Bihar. The funds were distributed to various NGOs operating in Bihar to support relief efforts. You have been appointed as the auditor for this NGO's accounts for the year in which it collected and disbursed these donations. Draft an audit program to audit the receipts of donations and the remittance of the collected funds to different NGOs.

Chapter 10 – Audit of Banks

19. Agrim, a CA student, is part of an engagement team conducting audit of Madurai branch of ARB Bank. CA Bhuvan, engagement partner, has asked him to verify provision made by branch as on March 31st, 2024 in respect of the following non-performing assets: -

Name of Account	NPA classification	Outstanding amount as on March 31st, 2024 (In ₹ lakhs)	Amount of provision made (In ₹ lakhs)
AK Industries	Doubtful (D1)	10.00	5.00
Jupiter Traders	Substandard asset	50.00	7.50
VT & Co.	Doubtful (D2)	30.00	30.00
ASD & Sons	Loss	1.00	1.00

The engagement partner has already verified NPA classification. Outstanding amounts as on March 31st, 2024, relating to each NPA account listed above (except ASD & Sons) are fully secured. However, only personal guarantee of proprietor (Net worth of proprietor ₹50 lakhs) is available in account of ASD & Sons. Comment on the correctness of the above provisions.

Agrim is in dilemma regarding classification of above accounts as NPA although these are fully secured or guaranteed. Guide him.

Chapter 11 – Ethics and Terms of Audit Engagements

20. CA Sudhakar has been appointed as the auditor of AMRO Ltd. Before accepting the appointment, he learns that his cousin, who held shares in the company and recently passed away without children, named him as the nominee for these shares, which have substantial value. Although holding such shares through a distant relative does not violate legal provisions or affect his independence, this unexpected inheritance places him in a dilemma. Advise CA Sudhakar on how he should deal with this situation and safeguard his independence.

SUGGESTED ANSWERS/HINTS

Answer Key- Case Scenario – 1

PART – I: Answers to Multiple Choice Questions

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

PART – II: Answers to Descriptive Questions

9. In conducting audit of financial statements, objectives of auditor in accordance with SA 200, "Overall Objectives of the Independent auditor and the conduct of an audit in accordance with Standards on Auditing" are: -

(a) To obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework; and

(b) To report on the financial statements, and communicate as required by the SAs, in accordance with the auditor's findings.

The process of audit suffers from certain inbuilt limitations due to which an auditor cannot obtain an absolute assurance that financial statements are free from misstatement due to fraud or error. These fundamental limitations arise due to the factors such as nature of financial reporting,

nature of audit procedures, not in the nature of investigation, timeliness of financial reporting and decrease in relevance of information over time and future events**.**

Preparation of financial statements involves making many judgments by management. These judgments may involve subjective decisions or a degree of uncertainty. Therefore, the auditor may not be able to obtain absolute assurance that financial statements are free from material misstatements due to frauds or errors. One of the premises for conducting an audit is that management acknowledges its responsibility of preparation of financial statements in accordance with applicable financial reporting framework and for devising suitable internal controls. However, such controls may not have operated to produce reliable financial information due to their own limitations.

In the context of RST Ltd., the management designed a control requiring that all invoices be stamped and signed by an authorized person in the Goods Receiving Section to confirm receipt of goods. However, collusion between two employees—the purchasing manager and the accounts clerk—allowed them to bypass this control by submitting fake invoices for payment. Collusion is a significant limitation of internal controls, as it overrides controls designed to prevent such fraud.

Given these factors, the auditor cannot provide absolute assurance that the financial statements are entirely free from material misstatements due to fraud or error.

10. The auditor shall plan the nature, timing and extent of direction and supervision of engagement team members and the review of their work. The nature, timing and extent of the direction and supervision of engagement team members and review of their work vary depending on many factors, including: -

1. The size and complexity of the entity.
2. The area of the audit.
3. The assessed risks of material misstatement
4. The capabilities and competence of the individual team members performing the audit work.

11. The auditor shall obtain an understanding of the control environment. As part of obtaining this understanding, the auditor shall evaluate whether:

(i) Management has created and maintained a culture of honesty and ethical behaviour and

(ii) The strengths in the control environment elements collectively provide an appropriate foundation for the other components of internal control.

The control environment includes:

(i) the governance and management functions and

(ii) the attitudes, awareness, and actions of those charged with governance and management.

(iii) the control environment sets the tone of an organization, influencing the control consciousness of its people.

Elements of the Control Environment

Elements of the control environment that may be relevant when obtaining an understanding of the control environment include the following:

(a) Communication and enforcement of integrity and ethical values

The effectiveness of controls cannot rise above the integrity and ethical values of the people who create, administer, and monitor them. Integrity and ethical behaviour are the product of the entity's ethical and behavioural standards, how they are communicated, and how they are reinforced in practice. The enforcement of integrity and ethical values includes, for example, management actions to eliminate or mitigate incentives or temptations that might prompt personnel to engage in dishonest, illegal, or unethical acts. The communication of entity policies on integrity and ethical values may include the communication of behavioural standards to personnel through policy statements and codes of conduct and by example.

(b) Commitment to competence: Matters such as management's consideration of the competence levels for particular jobs and how those levels translate into requisite skills and knowledge.

(c) Participation by those charged with governance: It includes attributes of those charged with governance such as their independence from management, their experience and stature, the extent of their involvement and the information they receive and the scrutiny of activities.

(d) Management's philosophy and operating style: Management's philosophy and operating style encompass a broad range of characteristics. For example, management's attitudes and actions towards financial reporting- what approach is taken by management in selecting accounting policies, approach in developing accounting estimates etc. Matters such as approach of management to taking and managing business risks, management's attitude towards information processing and accounting function and personnel reflects upon management's philosophy and operating style.

(e) Organisational structure: The framework within which an entity's activities for achieving its objectives are planned, executed, controlled, and reviewed. Establishing a relevant organisational structure includes considering key areas of authority and responsibility and appropriate lines of reporting. The appropriateness of an entity's organisational structure depends, in part, on its size and the nature of its activities.

(f) Assignment of authority and responsibility: Matters such as how authority and responsibility for operating activities are assigned and how reporting relationships and authorisation hierarchies are established.

(g) Human resource policies and practices

Policies and practices that relate to, for example, recruitment, orientation, training, evaluation, counselling, promotion, compensation, and remedial actions. Human resource policies and

practices often demonstrate important matters in relation to the control consciousness of an entity.

12. As per SA 610, "Using the work of Internal Auditor", direct assistance refers to the use of internal auditors to perform audit procedures under the direction, supervision and review of the external auditor.

Prior to using internal auditors to provide direct assistance for purposes of the audit, CA Mukul, the external auditor shall: -

(a) Obtain written agreement from an authorized representative of the entity that the internal auditors will be allowed to follow the external auditor's instructions, and that the entity will not intervene in the work the internal auditor performs for the external auditor and

(b) Obtain written agreement from the internal auditors that they will keep confidential specific matters as instructed by the external auditor and inform the external auditor of any threat to their objectivity.

Examples of procedures in which CA Mukul shall not use internal auditor to provide direct assistance to him are: -

(a) Procedures which involve making significant judgments in the audit;

(b) Procedures relating to higher assessed risks of material misstatement where the judgment required in performing the relevant audit procedures or evaluating the audit evidence gathered is more than limited.

(c) Procedures relating to work with which the internal auditors have been involved and which has already been, or will be, reported to management or those charged with governance by the internal audit function; or

(d) Procedures relating to decisions the external auditor makes in accordance with this SA regarding the internal audit function and the use of its work or direct assistance.

13. To verify that inventories of raw material & consumables and work-in-progress have been valued appropriately and as per generally accepted accounting policies and practices, the following procedures should be performed by CA Akshat:

For Raw materials and consumables:

- Ascertain what elements of cost are included e.g. carriage inward, non-refundable duties etc.
- If standard costs are used, enquire into basis of standards; how these are compared with actual costs and how variances are analysed and accounted for/ treated in accounting records.
- Test check cost prices used with purchase invoices received in the month(s) prior to counting.
- Follow up valuation of all damaged or obsolete inventories noted during observance of physical counting with a view to establishing a realistic net realizable value.

For Work in Progress:

- Ascertain how the various stages of production/ value additions are measured and in case estimates are made, understand the basis for such estimates.
- Ascertain what elements of cost are included. If overheads are included, ascertain the basis on which they are included and compare such basis with the available costing and financial data/ information maintained by the entity.
- Ensure that material costs exclude any abnormal wastage factors.

14. The auditor shall assemble the audit documentation in an audit file and complete the administrative process of assembling the final audit file on a timely basis after the date of the auditor's report.

♦ SQC 1, "Quality Control for Firms that perform Audits and Review of Historical Financial Information, and other Assurance and related services", requires firms to establish policies and procedures for the timely completion of the assembly of audit files.

- An appropriate time limit within which to complete the assembly of the final audit file is ordinarily not more than 60 days after the date of the auditor's report. The completion of the assembly of the final audit file after the date of the auditor's report is an administrative process that does not involve the performance of new audit procedures or the drawing of new conclusions.
- Changes may, however, be made to the audit documentation during the final assembly process, if they are administrative in nature.

Further, preparing sufficient and appropriate audit documentation on a timely basis helps to enhance the quality of the audit and facilitates the effective review and evaluation of the audit evidence obtained and conclusions reached before the auditor's report is finalized. Documentation prepared after the audit work has been performed is likely to be less accurate than documentation prepared at the time such work is performed.

In the given case, even after passage of more than six months, CA Ripun has not assembled an audit file. Besides, he has put in some papers with the current date which is not permissible at all. It shows that part of the audit documentation has been prepared afterwards putting a question mark on the quality of audit.

15. Loss of major markets, key customers and inability to obtain financing for new product development are examples of events or conditions that may cast a significant doubt on the entity's ability to continue as going concern.

If events or conditions have been identified that may cast significant doubt on the entity's ability to continue as a going concern, the auditor shall obtain sufficient appropriate audit evidence to determine whether or not a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern through performing additional audit procedures, including consideration of mitigating factors. These procedures shall include:

(a) Where management has not yet performed an assessment of the entity's ability to continue as a going concern, requesting management to make its assessment.

(b) Evaluating management's plans for future actions in relation to its going concern assessment, whether the outcome of these plans is likely to improve the situation and whether management's plans are feasible in the circumstances.

(c) Where the entity has prepared a cash flow forecast, and analysis of the forecast is a significant factor in considering the future outcome of events or conditions in the evaluation of management's plans for future actions: -

(i) Evaluating the reliability of the underlying data generated to prepare the forecast; and

(ii) Determining whether there is adequate support for the assumptions underlying the forecast.

(d) Considering whether any additional facts or information have become available since the date on which management made its assessment.

(e) Requesting written representations from management and, where appropriate, those charged with governance, regarding their plans for future actions and the feasibility of these plans.

16. The nature of the comparative information that is presented in an entity's financial statements depends on the requirements of the applicable financial reporting framework. There are two different broad approaches to the auditor's reporting responsibilities in respect of such comparative information: corresponding figures and comparative financial statements. The approach to be adopted is often specified by law or regulation but may also be specified in terms of engagement.

The essential audit reporting differences between the approaches are:

(a) For corresponding figures, the auditor's opinion on the financial statements refers to the current period only; whereas

(b) For comparative financial statements, the auditor's opinion refers to each period for which financial statements are presented.

Definition of Comparative Information – The amounts and disclosures included in the financial statements in respect of one or more prior periods in accordance with the applicable financial reporting framework.

Audit Procedures regarding comparative information

The auditor shall determine whether the financial statements include the comparative information required by the applicable financial reporting framework and whether such information is appropriately classified. For this purpose, the auditor shall evaluate whether:

(a) The comparative information agrees with the amounts and other disclosures presented in the prior period; and

(b) The accounting policies reflected in the comparative information are consistent with those applied in the current period or, if there have been changes in accounting policies, whether those changes have been properly accounted for and adequately presented and disclosed.

17. The 18-digit alpha numeric number noticed by her at the end of the audit report is Unique Document Identification number (UDIN). It is a system generated unique number. It was noticed that financial documents/ certificates attested by third persons misrepresenting themselves as CA Members were misleading the Authorities and Stakeholders. ICAI also received number of complaints of signatures of CAs being forged by non CAs. To curb the malpractices, ICAI implemented the concept of UDIN i.e. Unique Document Identification Number. Chartered Accountants having full-time Certificate of Practice can register on UDIN Portal and generate UDIN by registering the certificates attested/certified by them. An auditor is required to mention the UDIN with respect to each audit report being signed by him, along with his membership number while signing an audit report and Certificates.

It is required to be stated in case of audit reports and certificates.

18. Receipt of Donations:

(i) Internal Control System: Existence of internal control system particularly with reference to division of responsibilities in respect of authorised collection of donations, custody of receipt books and safe custody of money.

(ii) Custody of Receipt Books: Existence of system regarding issue of receipt books, whether unused receipt books are returned and the same are verified physically including checking of number of receipt books and sequence of numbering therein.

(iii) Receipt of Cheques: Receipt Book should have carbon copy for duplicate receipt and signed by a responsible official. All details relating to date of cheque, bank's name, date, amount, etc. should be clearly stated.

(iv) Bank Reconciliation: Reconciliation of bank statements with reference to all cash deposits not only with reference to date and amount but also with reference to receipt book.

(v) Cash Receipts: Register of cash donations to be vouched more extensively. If addresses are available of donors who had given cash, the same may be cross-checked by asking entity to post thank you letters mentioning amount, date and receipt number.

(vi) Foreign Contributions, if any, to receive special attention to compliance with applicable laws and regulations.

Remittance of Donations to Different NGOs:

(i) Mode of Sending Remittance: All remittances are through account payee cheques. Remittances through Demand Draft would also need to be scrutinised thoroughly with reference to recipient.

(ii) Confirming Receipt of Remittance: All remittances are supported by receipts and acknowledgements.

(iii) Identity: Recipient NGO is a genuine entity. Verify address, 80G Registration Number, etc.

(iv) Direct Confirmation Procedure: Send confirmation letters to entities to whom donations have been paid.

(v) Donation Utilisation: Utilisation of donations for providing relief to Tsunami victims and not for any other purpose.

(vi) System of NGOs' Selection: System for selecting NGO to whom donations have been sent.

19. The auditor is required to ensure that provision for NPA is made as per its classification in different categories which are given as under:

Categories of Non-Performing Assets:	**Provision required**
Substandard Assets: Would be one, which has remained NPA for a period less than or equal to 12 months.	15%
Doubtful Assets: Would be one which has remained in the substandard category for a period of 12 months.	
Sub-categories:	(Secured + Unsecured)
Doubtful up to 1 Year (D1)	25% + 100%
Doubtful 1 to 3 Years (D2)	40% + 100%
Doubtful more than 3 Years (D3)	100% + 100%
Loss Assets	100%

From the above provision, it can be concluded that in case of:

AK Industries- It has been classified as Doubtful (D1) category. Therefore, it requires provision of 25% of secured amount. That is provision of Rs 2.50 lakh (i.e 25% of ₹10 lakh) should be made instead of ₹ 5 lakh.

Jupiter Traders- It has been classified as Substandard asset. It requires provision of 15% of outstanding amount (i.e 15% of ₹ 50 lakhs) which comes to ₹ 7.50 lakh. Therefore, provision made by the branch is correct.

VT & Co.- It has been classified as Doubtful (D2) category. It requires provision of 40% of secured amount. That is provision of ₹ 12.00 lakh (40% of ₹ 30 lakhs) should be made instead of ₹ 30 lakh.

ASD & Sons- It has been classified as a loss asset which requires provision of 100% of outstanding amount. Therefore, the provision made by the branch is correct.

Classification as NPA should be based on the record of recovery. Availability of security or net worth of borrower/guarantor is not to be taken into account for purpose of treating an advance as NPA or otherwise. Hence, these accounts have been classified as NPA on the record of recovery although these are fully secured or guaranteed.

20. In the given situation, holding shares by CA Sudhakar involves financial interest in the company and is in nature of self-interest threat. Though he has come to hold shares due to nomination made by his distant relative before accepting the appointment.

Chartered Accountants have a responsibility to remain independent by taking into account the context in which they practice, the threats to independence and the safeguards available to address the threats.

Safeguards are actions, individually or in combination, that the professional accountant takes that effectively reduce threats to comply with the fundamental principles to an acceptable level.

To address the issue, the following guiding principles are to be applied: -

- For the public to have confidence in the quality of audit, it is essential that auditors should always be and appear to be independent of the entities that they are auditing.
- Before taking on any work, an auditor must conscientiously consider whether it involves threats to his independence.
- When such threats exist, the auditor should either desist from the task or eliminate the threat or at the very least, put in place safeguards which reduce the threats to an acceptable level. All such safeguard measures need to be recorded in a form that can serve as evidence of compliance with due process.
- If the auditor is unable to fully implement credible and adequate safeguards, then he must not accept the work.

Considering above, holding of shares of the same company for which he is offered appointment as auditor constitutes threat to his independence. Therefore, CA Sudhakar should take steps to eliminate the threat by selling shares immediately before accepting the appointment and in the absence of same, he should not accept the appointment as an auditor.

PAPER – 6:
FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT

6A: FINANCIAL MANAGEMENT

QUESTIONS

Division A: Case Scenarios

Integrated Case Scenario

1. Samvar Ltd, a leading **FMCG** company having its current presence in more than 150 Tier I and Tier II cities in India. The stores are operating in the brand name of **GoMART** competing with Reliance fresh, Walmart, BigBazaar and other chains. Owing to the increase in demand from Tier III cities and rural areas, it is planning for massive expansion and is contemplating to open up additional 50 stores which will have variety of FMCG products.

   The CFO and his team estimate that the funds needed for massive expansion would be ₹ 200 lakhs per store. Such funds would be utilized for buying out a space and setting up a store, buying the other required fixed assets, etc. Central government will provide a revenue subsidy of 15% on Gross profit if the overall cost of capital doesn't exceed 10%

   Apart from above, CFO and his team require an estimate on the additional capital needed based for the smooth running of fixed assets and its daily operations. Based on their market research, they have collected the other information for each store which is as follows-

Average Sales would be ₹ 120 lakhs p.a. with a GP margin of 18%. Customers pay through different digital modes and channels including POS systems (Debit and credit cards) which generally takes approx. 9 days for the funds to get credited in the bank account. 15% of the customers use debit and credit cards to make the payment. Installing a POS system comes with a fee of 2% of total sales through POS.

Being a FMCG outlet, inventories of multiple products need to be kept. Different products have different storage period. However primarily, products are classified into three broad categories, Durable, Semi Durable & Perishable. Perishable products comprise 60% of sales, whereas semi-durable is 25% and balance is for durable products. Inventory storage period for perishable, semi-durable & durable products are 10 days, 30 days & 60 days respectively. Suppliers of these products provide a credit period of average 30 days.

Each store will employ around 20 personnel of a different hierarchy and monthly average salaries to staff for each store is estimated at ₹ 4 lakhs per month. Company will pay employees' dues on the 1st of next month.

Samvar Ltd plans to keep optimum cash balance in hand as suggested by Baumol's model. Excess cash balance if any, will be invested in the marketable securities which will generate a return of 12% p.a. The total disbursement for the year is estimated at ₹ 1.50 lakhs per month with the transaction cost of ₹ 20 per transfer to the disbursement account.

The optimum capital structure with debt equity of 2:1 has been proven ideal for raising the finance and company wishes to follow the same pattern for the additional funds required for each store. Trade credit can also be utilized for financing the expansion needs.

The cost of raising debt and equity for each store is as per the slabs as under:

Project Cost *	**Cost of Debt**	**Minimum rate expected by equity share holders**
Upto 80 lakhs	10%	12.5%
Above 80 lakhs but upto 150 Lakhs	11.5%	13.5%

Above 150 lakhs & Upto 250 lakhs	12%	14%
Above 250 lakhs	13.5%	15%

*It means that upto 80 lakhs of project cost company can raise debt at 10% and equity at 12.5% and so on.

Tax rate applicable to the corporate is 25%

Based on the above details, calculate the following for each store:

i. The optimum Cash balance is

(A) ₹ 7,071

(B) ₹ 26,500

(C) ₹ 7,150

(D) ₹ 24,495

ii. The Gross and Net Working Capital for the next year would be

(A) ₹ 6.7730 L, (5.9396 L)

(B) ₹ 6.7730 L, 12.7125 L

(C) ₹ 200 L, (5.9396L)

(D) ₹ (5.9396 L), 6.7730 L

iii. The amount of total funds needed to setup a store is

(A) ₹ 194.0605 L

(B) ₹ 200 L

(C) ₹ 6.7730 L

(D) ₹ 206.7730 L

iv. The overall cost of capital for raising additional funds for setting up of each store is

(A) 10.01%

(B) 10.65%

(C) 9.90%

(D) 8.91%

v. The amount of revenue subsidy granted by the central govt is

(A) ₹ 3 L

(B) ₹ 3.24 L

(C) Nil

(D) ₹ 2.25 L

Dividend Decision

2. The cost of capital of a firm is 12% & its expected earning per share at the end of the year is ₹ 20. its existing payout ratio is 25%. the company is planning to increase its payout ratio to 50% what will be the effect of this change on the market price of equity share (MPS) of the company as per Gordon model, if the reinvestment rate of the company is 15%?

(A) It will increase by ₹ 444.45

(B) It will decrease by ₹ 444.45

(C) It will increase by ₹ 222.22

(D) It will decrease by ₹ 222.22

Financing Decision - Cost of Capital

3. Abhi Ltd is an all equity financed company. It is considering replacing ₹ 275 lakhs equity shares with 15% debentures of the same amount. Current Market value of the company is 1750 lakhs with cost of capital at 20%. Future EBITs are going to be constant and entire earnings are going to be distributed. Corporate Tax Rate can be assumed to be 30%. What will be the new cost of equity of the firm?

(A) 19.11%

(B) 17.53%

(C) 10.50%

(D) 20.62%

Division B: Descriptive Questions

Financial Analysis & Planning – Ratio Analysis

4. Vardhaman Limited gives you the following information related for the year ending 31st March, 2024:

Particulars	Amount (₹)
Current Ratio	3:1
Loan funds to Owned Funds Ratio	1:3
Gross Profit Ratio	25%
Stock Turnover Ratio	10
Net Working Capital	₹ 5,00,000
Return on Total Assets (pre-tax)	15%
MPS	₹ 20
Total Assets Turnover Ratio	2.5
Opening stock	₹ 6,50,500
Fixed Assets	₹ 15,00,000
75,000 equity shares of	₹ 10 each
25,000, 12% Pref. Shares of	₹ 10 each
Depreciation	₹ 50,000
Interest on Debt	9%
Future Instalments	₹ 2,00,000

Tax rate applicable to the company is 25%

You are required to CALCULATE:

(i) Quick Ratio

(ii) Fixed Assets Turnover Ratio

(iii) Debt Service Coverage

(iv) Earnings per Share

(v) Price Earnings Ratio

Financing Decision - Cost of Capital

5. The Capital Structure of Samyaktva Limited is as follows:

	Amount (in ₹)
12% Debentures	3,50,000
14% Pref. Shares	4,50,000
Equity shares (Face value of ₹ 10 each)	8,50,000
	16,50,000

Additional Information:

1. ₹ 100 per debentures redeemable at premium of 6% with floatation cost of 5% & 5 years of maturity. The current market price of the debenture is ₹ 115
2. ₹ 100 per preference shares redeemable at a premium of 10%, issued at discount of 2% with a floatation cost of 5% on the issue price. The current market price per preference share is ₹ 108. It has maturity of 10 years
3. An equity share has a floatation cost of ₹ 5 with a market price per share currently quoted at ₹ 30. Samyaktva Limited paid a last dividend of ₹ 4 and the company is expected to give an annual growth rate of 9% on the dividends. The company has a practice of paying all the earnings in the form of dividends.
4. Corporate Taxation rate is at 25%

CALCULATE WACC using market value weights

Financing Decision - Capital Structure

6. Ritu Limited in the expansion stage and it provides you the following information:

	(₹)
Profit (EBIT)	5,00,000
Less: Interest on Debenture @ 10%	(1,00,000)
EBT	4,00,000
Less Income Tax @ 30%	(1,20,000)
	2,80,000
No. of Equity Shares (₹ 10 each)	50,000

Earnings per share (EPS)	5.6
Price /EPS (PE) Ratio	10

The company has reserves and surplus of ₹ 10,00,000 and required ₹ 5,00,000 further for modernisation. Return on Capital Employed (ROCE) is constant. Debt (Debt/ Equity) Ratio lesser than 2 will raise the P/E Ratio to 12. Interest rate on additional debts is 12%. You are required to ASCERTAIN the probable price of the share.

(i) If the additional capital are raised as debt; and

(ii) If the amount is raised by issuing equity shares at ruling market price.

Financing Decision – Leverages

7. From the following financial data of Company X and Company Y:

(i) PREPARE their Income Statements.

(ii) CALCULATE Margin of Safety for both the Companies

(iii) CALCULATE Percentage change in EPS for both the companies, if percentage change in sales is 25%

(in ₹)

	Company X	Company Y
Variable Cost	72,000	65% of Sales
Fixed Cost	35,000	-
Interest Expenses	12,000	6,000
Financial Leverage	4:1	-
Operating Leverage	-	5:1
Income Tax Rate	30%	30%
Sales	-	1,45,000

Dividend Decisions

8. The following information is supplied to you:

Particulars	Amount (₹)
Total Earnings	4,50,000
No of Equity Shares (of ₹ 100 each)	25,000 shares
Retention ratio	40%
MPS	198

Applying Walter's Model:

(i) ANALYSE whether the company is following an optimal dividend policy.

(ii) COMPUTE P/E ratio at which the dividend policy will have no effect on the value of the share. Also calculate the MPS at such P/E ratio

(iii) Will your decision change if the P/E ratio is 4.5? ANALYSE.

Investment Decisions – Capital Budgeting

9. A company is considering the proposal to take up a new project which requires investment of ₹ 850 lakhs in plant & machinery and ₹ 150 lakhs in working capital. The project is expected to yield the following Cash flows before tax and depreciation over the next five years:

Year	Amount (₹ in Lakhs)
1	290
2	320
3	360
4	390
5	270

The desired rate of return from the project is 14% and assets must be depreciated at 20% on a written down value basis. The scrap value at the end of the five-year period may be taken as ₹ 140 lakhs. The income tax

applicable to the company is 20%. This is the only asset in the entire block. Capital gains tax is at 15% (for capital loss as well)

You are required to CALCULATE the net present value of the project and advise the management to take appropriate decisions. Also calculate the Internal Rate of Return and Desirability factor of the Project.

Note: Present values of Re. 1 at different rates of interest are as follows:

Year	14%	16%	20%
1	0.88	0.86	0.83
2	0.77	0.74	0.69
3	0.67	0.64	0.58
4	0.59	0.55	0.48
5	0.52	0.48	0.40

Management of Working Capital

10. Nirmoh Limited wants to avail short-term loan from the bank. However, bank grants short term loan by keeping the collateral in the form of accounts receivable. A bank is analyzing the receivables of Nirmoh Limited to identify acceptable collateral for a short-term loan.

The current policy of the company is 3/10 net 40. Bank will lend only to the extent of 90% of acceptable receivables at an interest rate of 12% only if both the conditions mentioned below are fulfilled. Bank will keep a reserve of 5% for cash discount & returns

(a) Customers are not currently overdue for more than 5 days to the net period

(b) Average aging (payment period) of the customer should not exceed 15 days past the net period.

If any of the above conditions are not fulfilled, the bank will lend 65% of the receivables subject to a reserve of 15% and the interest rate will be charged at 15% on such accounts. The corporate tax rate applicable is 25%.

On the scrutiny of all the receivables, following are the acceptable receivables considered for lending-

Accounts	Amount (₹)	Outstanding in Days since invoiced	Average Aging (payment period) in Days
DR 01	50,000	37	40
DR 02	25,000	25	48
DR 03	1,20,000	47	49
DR 04	72,000	10	56
DR 05	45,000	30	30
DR 06	1,75,000	39	50
DR 07	19,000	55	25
DR 08	54,000	44	54
DR 09	1,05,000	15	25
DR 10	37,000	22	75

You are required to CALCULATE:

(a) Total amount lend by the bank

(b) Effective Interest cost (%) to the company

11. (a) LIST the emerging issues (any four) affecting the future role of CFO.

(b) EXPLAIN any four Methods for Computation of Cost of Equity Capital.

(c) Do the profitability index and the NPV criterion of evaluating investment proposals lead to the same acceptance-rejection and ranking decisions? In what SITUATIONS will they give conflicting results?

SUGGESTED ANSWERS/HINTS

1. i. (D) ₹ 24,495

As per William J Baumol,

optimum cash balance = $\sqrt{\frac{2AT}{O}}$

A = Annual Cash disbursement

T = Cost per transfer

O = Opportunity cost

= $\sqrt{\frac{2 \times 18,00,000 \times 20}{0.12}}$ **= ₹ 24,495/-**

ii. (A) ₹6.7730 L, (5.9396 L)

Gross working capital is sum of total current assets and net working capital is Gross working capital less current liabilities.

Estimation of Working Capital Statement

		Amount (₹)	**Amount (₹)**
A)	**CURRENT ASSETS / GROSS W.C**		
	1. FG Inventory **WN - 1**	6,15,000	
	2. Trade receivables **WN - 2**	37,800	
	3. Cash/ bank balance **(Calculated in Solution 1)**	24,495	**6,77,295**
B)	**CURRENT LIABILTIES**		
	1. Trade payables **WN - 3**	8,71,250	
	2. Outstanding salaries **WN - 4**	4,00,000	**12,71,250**
NET WORKING CAPITAL (A) - (B)			**(5,93,955)**

WN – 1 Calculation of FG Inventory

FG Inventory = COGS x $\frac{\text{FG STORAGE PERIOD (DAYS)}}{360}$

COGS = 120 Lakhs x 82% = 98.40 Lakhs

Perishable = 98.40 x 60% x 10 /360 = 1.64 Lakhs

Semi Durable = 98.40 X 25% X 30 /360 = 2.05 Lakhs

Durable = 98.40 X 15% X 60 /360 = 2.46 Lakhs

Total = **₹ 6.15 lakhs**

WN – 2 Calculation of Trade Receivables

Since, company is into FMCG industry, sales are always on cash basis as no credit is given to any of the custome₹ However, as mentioned in the case study, company will get the credit in the bank account only after 9 days for those customers that pay through POS (debit and credit cards). It means companies funds' get blocked for 9 days.

Company's trade receivable would only comprise of 15% of total sales as rest are through cash basis

Trade Receivables = Cost of Sales x Days Blocked / 360

= 15.12 L x 9 / 360

= **0.378 Lakhs**

Cost of Sales = COGS + POS Transaction fees

= (98.40 L x 0.15) + (120 L x 0.15 x 2%)

= 15.12 Lakhs

WN – 3 Calculation of Trade Payables

$$\text{Trade Payables} = \text{Purchases} \times \frac{\text{Average Credit period in days}}{360}$$

= 104.55 x 30 /360

= **8.7125 Lakhs**

Purchases = COGS (+) Closing Stock (-) Opening Stock

Since, company is planning to open up new store, its opening stock would be NIL but there would be definitely a closing FG stock which is calculated in WN -1

Therefore, Purchases = 98.40 L + 6.15 L - 0 = **104.55 Lakhs**

WN – 4 Calculation of Outstanding salaries

Salaries are paid on 1st of next month, thereby meaning it has been outstanding for a period of 30 days assuming salaries accruing evenly throughout.

Outstanding salaries = 48,00,000 x 30 / 360

= **4,00,000**

iii. (A) ₹ 194.0605 L

Total Capital needed = Total capital needs (Fixed assets) + Working Capital needs

= 200 L + (5,93,955)

= ₹ 194.0605 L

iv. (C) 9.90%

Samvar Ltd would require financing of ₹ 194.0605 lakhs from debt and equity and not ₹ 200 lakhs as trade credit is also considered to be a source of finance as mentioned in the case study.

Furthermore, the overall cost of raising this additional fund for each store of ₹ 194.0605 needs to be calculated slab wise

Project Cost	Weights (W)	Cost (K)	W X K	Total cost (₹)
Upto 80 Lakhs	Debt = 0.67 Equity = 0.33	Kd = 10 (1 - 0.25) = 7.5 Ke = 12.5	Ko = 9.167%	= 80L x 9.167% **= 7.334 Lakhs**
Above 80 L upto 150 L	Debt = 0.67 Equity = 0.33	Kd = 11.5(1-0.25) = 8.625 Ke = 13.5	Ko = 10.25%	= 70L x 10.25% **= 7.175 Lakhs**
Above 150 L upto 250 L	Debt = 0.67 Equity = 0.33	K = 12 (1-0.25) = 9 Ke = 14	Ko = 10.667%	=44.0605L x 10.667% **= 4.7Lakhs**

Total Funds = 194.0605 L

Total Cost (₹) = 7.334 L + 7.175 L + 4.700 L = 19.209 L

Ko = Total Cost (₹) / Total Funds

= 19.209 / 194.0605

= 9.90%

v. (B) ₹ 3.24 L

Since the Overall Cost of Capital is below 10%, Samvar Ltd is eligible for revenue subsidy

Revenue Subsidy = GP x 15%

= 21.6 L x 15%

= **₹ 3.24 Lakhs**

2. (B) It will decrease by ₹ 444.45

Current D1 = 20 x 25% = 5

Current g = 0.75 x 0.15 = 11.25%

Current MPS = 5/(0.12 - 0.1125) = 666.67

Proposed D1 = 20 x 50% = 10

proposed g = 0.5 x 0.15 = 0.075,

Proposed MPS = 10/(0.12 - 0.075) = 222.22

Change in MPS = 666.67 - 222.22 = **₹444.45**

3. (D) 20.62%

Current PAT	= 1750 x 20%	= 350
Current PBT	= Future EBIT	= 350/0.7 = 500
Future PBT	= 500 - 275x15%	= 458.75
Future PAT	= 458.75 x 70%	= 321.125
Value (L)	= Value (UL) + Debt x t	= 1750+275 x 30% = 1832.5
Value of Equity	= 1832.5-275	= 1557.5
Ke	= 321.125/1557.5	**= 20.62%**

4. WN 1: Calculation of Current Assets & Current Liabilities

Current Ratio = CA / CL = 3:1

Therefore, CA	=	3CL
Net Working Capital	=	CA - CL = 5,00,000
	=	3CL (-) CL = 5,00,000
Therefore, CL	=	2,50,000,
CA	=	7,50,000

WN 2: Calculation of Average Stock Value & Closing Stock

Total Assets	=	Fixed Assets + Current Assets
	=	15 L + 7.5 L = **22.50 lakhs**
Total Assets Turnover Ratio	=	Sales / Total Assets = 2.5 (given)
Therefore Sales	=	22.5 lakhs X 2.5
Sales	=	**56,25,000**
GP Margin	=	25%, therefore COGS = 75% of Sales
COGS	=	56.25 x 75% = **42,18,750**
Stock Turnover Ratio	=	COGS / Average Stock = 10 (given)
Average Stock	=	42,18,750 / 10 = **4,21,875**
Average Stock	=	Op. Stock + Cl. Stock / 2
4,21,875	=	6,50,500 + Cl. Stock / 2
Cl Stock	=	1,93,250

WN 3: Calculation of Cash Profit before Interest & Tax

Return on Total Assets (pre-tax)	= (EBIT / Total Assets)
0.15	= EBIT / 22.50 lakhs
Therefore, EBIT	= **3,37,500**
Cash Profit before Int & Tax	= EBIT + Depreciation
	= 337500 + 50000
Cash Profit before Int & Tax	= **3,87,500**

WN 4 : Calculation of Loan Funds (Debt) & Owned Funds (Equity)

Debt to Equity = 1 : 3, which means 3 times Debt = Equity (Owned Funds)

As per the Accounting equation,

Equity + Debt + Current Liab.	**=**	**Fixed Assets + Current Assets**
3 Debt + Debt + 2,50,000	=	15,00,000 + 7,50,000
4 Debt	=	20,00,000
Therefor Debt (Loan Funds)	=	**5,00,000**
Equity (Owned Funds)	=	**15,00,000**

WN 5: Calculation of Earnings Available to Eq. Share holders

Particulars	Amount (₹)
EBIT	3,37,500
(-) Int (5 lakhs x 9%)	(45,000)
EBT	2,92,500
(-) Tax @ 0.25	(73,125)
EAT	2,19,375
(-) Pref Div. (250000 x 12%)	(30,000)
Earnings For Eq. Sh Holders	1,89,375

1. Quick Ratio = {CA - CI Stock}/CL

   = 7,50,000 – 1,93,250 / 2,50,000

   Quick Ratio = 2.23 : 1

2. Fixed Assets Turnover Ratio = Sales / Total Fixed Assets

   = 56,25,000 / 15,00,000

   Fixed Assets Turnover Ratio = 3.75 times

3. Debt Service Coverage Ratio = Cash profit before Int & Tax / Int + Instalments

   = 3,87,500 / (45,000+2,00,000)

   Debt Service Coverage Ratio = 1.58 times.

4. **EPS = Earnings for Eq. Shareholders / No of Eq. Shareholders**

= 1,89,375/75,000

EPS = ₹ 2.53

5. Price to Earnings Ratio = MPS / EPS

= 20 / 2.53

Price to Earnings Ratio = 7.91 times

5. WN 1: Calculation of Cost of Debt

$$Kd = \frac{I(1-t)+\frac{(RV-NP)}{n}}{\frac{(RV+NP)}{2}}$$

RV = 100 + 6% = 106

n = term = 5 years

t = tax = 0.25

NP = Issue Price – Floatation cost

= 115 – 5% (Issue price will be at Market price and no Face Value)

= 109.25

$$Kd = \frac{12(1-0.25)+\frac{(106-109.25)}{5}}{\frac{(106+109.25)}{2}}$$

Therefore **Kd = 7.76%**

WN 2: Calculation of Cost of Preference Shares

$$Kp = \frac{PD+\frac{(RV-NP)}{n}}{\frac{(RV+NP)}{2}}$$

RV = 100 + 10% = 110

n = term = 10 years

NP = Issue Price – Floatation cost

Issue Price = (108 – 2%) = 105.84

Net Proceeds = 105.84 (-) 5% = 100.55

$$\text{Kp} = \frac{14+\frac{(110-100.55)}{10}}{\frac{(110+100.55)}{2}}$$

Therefore **Kp = 14.19%**

WN 3: Calculation of Cost of Equity

Since growth rate is given, Ke is to be calculated by using Gordon's formula

As per Gordon,

$$\text{Ke} = \frac{D_1}{P_0} + g$$

Where, D1 = Expected dividend at the end of Year 1

Po = Current Market Price (–) Floatation cost

G = growth rate in dividends

$$\text{Ke} = \frac{4+9\% \times 4}{30-5} + 0.09$$

Ke = 26.44%

Calculation of WACC using Market Value Weights

Sources	Amount of Capital (₹)	Weights (W)	Cost (K)	W X K
Debentures	4,02,500 (3,500 x 115)	0.1171	7.76 (WN 1)	0.9087
Preference shares	4,86,000 (4,500 x 108)	0.1413	14.19 (WN 2)	2.00
Equity shares	25,50,000 (85,000 x 30)	0.7416	26.44 (WN 3)	19.6079
	34,38,500			Ko = 22.52%

6. Ascertainment of probable price of shares of Akash limited

Particulars	Plan-I	Plan-II
	If ₹ 5,00,000 is raised as debt (₹)	**If ₹ 5,00,000 is raised by issuing equity shares (₹)**
Earnings Before Interest and Tax (EBIT) {20% of new capital i.e. 20% of (₹ 25,00,000 + ₹ 5,00,000)} (Refer working note1)	6,00,000	6,00,000
Less: Interest on old debentures (10% of ₹ 10,00,000)	(1,00,000)	(1,00,000)
Less: Interest on new debt (12% of ₹ 5,00,000)	(60,000)	--
Earnings Before Tax (EBT)	4,40,000	5,00,000
Less: Tax @ 30%	(1,32,000)	(1,50,000)
Earnings for equity shareholders (EAT)	3,08,000	3,50,000
No. of Equity Shares (refer working note 2)	50,000	58,929
Earnings per Share (EPS)	₹ 6.16	₹ 5.94
Price/ Earnings (P/E) Ratio (refer working note 3)	12	10
Probable Price Per Share (PE Ratio × EPS)	₹ 73.92	₹ 59.40

Working Notes:

1. Calculation of existing Return of Capital Employed (ROCE):

	(₹)
Equity Share capital (50,000 shares × ₹ 10)	5,00,000

10% Debentures $\left(₹1,00,000 \times \frac{100}{10}\right)$	10,00,000
Reserves and Surplus	10,00,000
Total Capital Employed	25,00,000
Earnings before interest and tax (EBIT) (given)	5,00,000
ROCE $= \frac{₹\,5,000,000}{₹\,25,00,000} \times 100$	20%

2. Number of Equity Shares to be issued in Plan-II:

$$= \frac{₹5,00,000}{₹56} = 8,929 \text{shares}$$

Thus, after the issue total number of shares = 50,000+ 8,929 = 58,929 shares

3. Debt/Equity Ratio if ₹ 5,00,000 is raised as debt:

$$= \frac{₹15,00,000}{₹15,00,000} = 1$$

As the debt equity ratio is less than 2 the P/E ratio will be increase to 12 in Plan-I

7. (i) Income Statement

Particulars	Co. X (₹)	Co. Y (₹)
Sales	1,23,000 **(WN 2)**	1,45,000
(-) Variable Cost	(72,000)	(94,250) (65% on sales)
Contribution	51,000 **(WN 2)**	50,750
(-) Fixed Cost	(35,000)	(40,600)
EBIT	16,000 **(WN 1)**	10,150 **(WN 3)**
(-) Interest	(12,000)	(6,000)

EBT	4,000	4,150
(-) Tax @ 30%	(1,200)	(1,245)
EAT	**2,800**	**2,905**

WN 1: Calculation of EBIT for Co. X using Financial Leverage

$$FL = \frac{EBIT}{EBT} \text{ or } \frac{EBIT}{EBIT - Interest}$$

$$4 = \frac{EBIT}{EBIT - 12,000}$$

EBIT = ₹ 16,000

EBT = ₹ 16,000 – ₹ 12,000 = ₹ 4,000

WN 2: Calculation of Contribution and Sales using reverse mechanism

Contribution = EBIT + Fixed Cost

= ₹ 16,000 + ₹ 35,000

Contribution = ₹ 51,000

Sales = Contribution + Variable Cost

Sales = ₹1,23,000

WN 3: Calculation of EBIT for Co. Y using Operating leverage

OL = Contribution / EBIT

$$5 = \frac{50,750}{EBIT}$$

EBIT = ₹ 10,150

(ii) Margin of Safety (MOS) is inversely proportionate to the Operating Leverage as higher the safety margin lower would be the business risk

$$MOS = \frac{1}{OL}$$

Operating Leverage (Co. X) $= \frac{51,000}{16,000}$

Operating Leverage (Co. X) = 3.1875 : 1

Therefore, MOS for Co. X = 1 / 3.1875

MOS for Co. X = 31.37%

Operating Leverage (Co. Y) = 5 : 1

Therefore, MOS for Co. X $= \frac{1}{5}$

MOS for Co. Y = 20%

(iii) Combined leverage measures the percentage change in EPS due to percentage change in sales

Combined Leverage $= \frac{\text{Contribution}}{\text{EBT}}$

Combined Leverage (Co. X) $= \frac{51,000}{4,000}$

$= 12.75$

Combined Leverage $= \frac{\text{\% change in EPS}}{\text{\% change in sales}}$

12.75 $= \frac{\text{\% change in EPS}}{25\%}$

% change in EPS (Co. X) = 318.75%

Combined Leverage (Co. Y) $= \frac{50,750}{4,150}$

$= 12.23$

12.23 $= \frac{\text{\% change in EPS}}{25\%}$

% change in EPS (Co. Y) = 305.75%

8. (i) As per Walter,

If ROI > Ke, firm should retain everything and distribute nothing to maximize the share price. On the contrary, if ROI < Ke, firm should distribute everything and retain nothing to maximize the wealth of the equity owners.

ROI = Total Earnings / Equity Share capital

= 4,50,000 / 25,00,000

ROI = 18%

Ke = $\frac{1}{PE}$

P.E Ratio = MPS / EPS = 198 /18 = 11

Therefor Ke = 1/11 = 9.091%

Since ROI > Ke, optimal dividend policy of the firm should be to retain everything and distribute nothing. However, the firm has retained 40% and distributed 60%, hence it is not having an optimal dividend policy as per Walter's model.

(ii) When ROI = Ke, dividend policy of the company will have no effect on the value of the share as per Walter's model

Therefore, in that case, Ke should be equal to 18%

P.E Ratio = $\frac{1}{Ke} = \frac{1}{0.18}$

P.E Ratio = 5.56 times

MPS at the above P.E Ratio = 18 x 5.56 = ₹ 100.08

(iii) If P.E Ratio is 4.5,

Ke = $\frac{1}{4.5}$ = 22.22%

Since, ROI < Ke, optimal dividend policy of the firm should be to distribute everything and retain nothing, as the value of share would be maximum at that point thereby maximizing the wealth of the shareholder

9. (A) Calculation of NPV

WN 1 : Calculation of Present Value of Cash Outflow (PV CO)

(i) Initial Investment = ₹ 850 lakhs

(ii) Working capital outlay = ₹ 150 lakhs

Therefore, total PV CO = ₹ 1000 lakhs

WN 2 : Calculation of Present Value of Cash Inflows (PV CI)

Cash flows before tax are given i.e. nothing but NPBDT

Amount (₹ in lakhs)

Year	1	2	3	4	5
NPBDT	290.00	320.00	360.00	390.00	270.00
(-) Dep	170.00	136.00	108.80	87.04	69.63
NPBT	120.00	184.00	251.20	302.96	200.37
(-) Tax	24.00	36.80	50.24	60.59	40.07
NPAT	96.00	147.20	200.96	242.37	160.29
(+) Dep	170.00	136.00	108.80	87.04	69.63
CFAT	266.00	283.20	309.76	329.41	229.93
(+) Working Capital Release					150.00
(+) Scrap					140.00
PV Factor @ 14%	0.88	0.77	0.67	0.59	0.52
PV CI	**234.08**	**218.06**	**207.54**	**194.35**	**270.36**

(i) Total PV CI = ₹ 1124.40 Lakhs

WN 3 : Calculation of Present Value of tax savings on short term Capital loss

	₹ in Lakhs
WDV at end of 5th year	278.53
(-) Sale value	140.00

Loss on sale	138.53
Tax savings on above @ 15%	20.78

PV of tax savings on short term capital loss (STCL) = Tax saving x PV factor (14%, 5th year)

= 20.78 x 0.52

= ₹ 10.81 lakhs

NPV = PV CI + PV of tax savings on STCL - PV CO

= 1124.40 + 10.81 - 1000

NPV = ₹ 135.20 lakhs

Advise: Since the NPV of the project is positive, project should be accepted

(B) Calculation of IRR

IRR is that discounting rate where NPV = 0 (point where PV of all CI = PV Co)

We know that @ 14%, NPV is ₹ 135.20, so by trial-and-error method we need to calculate that rate where NPV equals 0.

When Discounting rate is 16%

	1	2	3	4	5
CFAT	266.00	283.20	309.76	329.41	229.93
(+) Working Capital Release					150.00
(+) Scrap					140.00
PV Factor @ 14%	0.86	0.74	0.64	0.55	0.48
PV CI	**228.76**	**209.57**	**198.25**	**181.17**	**249.56**

PV CI = 1067.31

(+) PV of tax savings on STCL = 9.97 {20.78 x 0.48}

(-) PV CO = (1000)

NPV **= ₹ 77.29**

Since NPV is positive at 16% as well, we need to go for Trial II at 20%

When Discounting rate is 20%

	1	2	3	4	5
CFAT	266.00	283.20	309.76	329.41	229.93
(+) Working Capital Release					150.00
(+) Scrap					140.00
PV Factor @ 14%	0.83	0.69	0.58	0.48	0.4
PV CI	220.78	195.41	179.66	158.12	207.97

PV CI = 961.94

(+) PV of tax savings on STCL = 8.31 {20.78 x 0.40}

(-) PV CO = (1000)

NPV **= ₹ (29.75)**

Since NPV is negative at 20%, IRR lies somewhere between 16% and 20%

$$\textbf{IRR} = LR + \frac{\text{NPV at LR}}{\text{NPV at LR - NPV at HR}} \times (HR - LR)$$

LR = Lower Rate (16% here) HR = Higher Rate (20% here)

$$IRR = 16 + \frac{77.29}{77.29 - (-29.75)} \times (20 - 16)$$

IRR = 18.89%

(C) Calculation of Desirability Factory (Profitability Index)

PI = TOTAL PV CI / PV CO

PI = 1135.21 / 1000

PI = 1.13521

10. (A) **Condition (a)** says that accounts shouldn't be overdue for more than 5 days to the net period. In other words, it means those accounts who are overdue by 45 days (40 days + 5 additional days), will not fulfill condition a) and thus will not be eligible for 90% lending.

Therefore, from the above, we can see that **Accounts DR 03 & DR 07** are overdue for more than 45 days and hence will not be eligible for 90% lending.

Condition (b) says that average receivables ageing (payment period) should not exceed 15 days to the net period i.e. it should not exceed 55 days (40 days + 15 days = 55 days). Therefore, from the above, we can see that **Accounts DR 04 & DR 10** has an ageing of more than 55 days. Hence, they would also not be eligible for 90% lending.

Amount of Bank Lending:

Accounts	Bank Lending at 90%	Bank Lending at 65%
DR 01	50,000	-
DR 02	25,000	-
DR 03	-	1,20,000
DR 04	-	72,000
DR 05	45,000	-
DR 06	1,75,000	-
DR 07	-	19,000
DR 08	54,000	-
DR 09	1,05,000	-
DR 10	-	37,000
Total	**4,54,000**	**2,48,000**
(-) Reserve	22,700 {4,54,000 x 5%}	37,200 {2,48,000 x 15%}
Net	**4,31,300**	**2,10,800**
Loan	**3,88,170**	**1,37,020**

Total short-term loan granted by the bank = ₹ 5,25,190

(B) Calculation of the Effective Interest Cost

Interest at 12% (On 90% lending) = 3,88,170 x 0.12 = 46,580.4

Interest at 15% (On 65% lending) = 1,37,020 x 0.15 = 20,553

Total Interest = ₹ 67,133.4

Effective Interest Cost (%) = Interest (1-t) / Total Short-term Loan

= 67,133.4 (1-0.25) / 5,25,190

Effective Interest Cost (%) = 9.59%

11. (a) Emerging Issues/Priorities Affecting the Future Role of Chief Financial Officer (CFO)

(i) **Regulation**: Regulation requirements are increasing and CFOs have an increasingly personal stake in regulatory adherence.

(ii) **Globalisation:** The challenges of globalisation are creating a need for finance leaders to develop a finance function that works effectively on the global stage and that embraces diversity.

(iii) **Technology:** Technology is evolving very quickly, providing the potential for CFOs to reconfigure finance processes and drive business insight through 'big data' and analytics.

(iv) **Risk:** The nature of the risks that organisations face are changing, requiring more effective risk management approaches and increasingly CFOs have a role to play in ensuring an appropriate corporate ethos.

(v) **Transformation:** There will be more pressure on CFOs to transform their finance functions to drive a better service to the business at zero cost impact.

(vi) **Stakeholder Management:** Stakeholder management and relationships will become important as increasingly CFOs become the face of the corporate brand.

(vii) **Strategy:** There will be a greater role to play in strategy

validation and execution, because the environment is more complex and quick changing, calling on the analytical skills CFOs can bring.

(viii) Reporting: Reporting requirements will broaden and continue to be burdensome for CFOs.

(ix) Talent and Capability: A brighter spotlight will shine on talent, capability and behaviours in the top finance role.

(b) Cost of equity capital is the rate of return which equates the present value of expected dividends with the market share price.

Methods for Computation of Cost of Equity Capital

- **Dividend Price Approach (:** Here, cost of equity capital is computed by dividing the expected dividend by market price per share.

$$K_e = \frac{D_1}{P_o}$$

- **Earning/ Price Approach:** The advocates of this approach co-relate the earnings of the company with the market price of its share.

$$K_e = \frac{E}{P}$$

- **Realized Yield Approach:** According to this approach, the average rate of return realized in the past few years is historically regarded as 'expected return' in the future. The yield of equity for the year is:

$$Y_t = \frac{D_t + P_t}{P_{t-1}}$$

- **Capital Asset Pricing Model Approach (CAPM):** CAPM model describes the risk-return trade-off for securities. It describes the linear relationship between risk and return for securities.

$K_e = R_f + ß\ (R_m - R_f)$

(c) In the most of the situations the Net Present Value Method (NPV) and Profitability Index (PI) yield same accept or reject decision. In general items, under PI method a project is acceptable if profitability index value is greater than 1 and rejected if it less than 1. Under NPV method a project is acceptable if Net present value of a project is positive and rejected if it is negative. Clearly a project offering a profitability index greater than 1 must also offer a net present value which is positive. But a conflict may arise between two methods if a choice between mutually exclusive projects has to be made. Consider the following example:

	Project A	**Project B**
PV of Cash inflows	3,00,000	1,60,000
Initial cash outflows	1,00,000	40,000
Net present value	2,00,000	1,20,000
P.I	$\frac{3,00,000}{1,00,000} = 3$	$\frac{1,60,000}{40,000} = 4$

According to NPV method, project A would be preferred, whereas according to profitability index method project B would be preferred.

This is because Net present value gives ranking on the basis of absolute value of rupees, whereas, profitability index gives ranking on the basis of ratio. Although PI method is based on NPV, it is a better evaluation technique than NPV in a situation of capital rationing.

6B: STRATEGIC MANAGEMENT

QUESTIONS

Multiple Choice Questions

1. In the ever-growing consumer electronics industry, Horizon Technologies found itself at a crossroads in 2018. The company, founded a decade earlier, had established itself as a key player in the global market for smartphones and other electronics. However, the pressure to stay relevant, meet customer demands, and fend off competitors was mounting. This is the story of how Horizon Technologies navigated its challenges, leveraging key business strategies and analyses to achieve remarkable success.

   Horizon Technologies recognized the need to divide its operations to find areas for improvement. They conducted a comprehensive value chain analysis, identifying both primary and support activities. By streamlining processes and eliminating redundancies, the company reduced production costs and enhanced product quality. This allowed them to offer more competitive prices, thus gaining a strategic edge in the market.

   The company's CEO, Mr. Jonathan Mercer, was known for his authoritative management style. His challenge was to transform his leadership approach to one that encouraged creativity and teamwork within the SBUs. Mr. Mercer invested in leadership development programs for middle and senior managers to enhance their interpersonal and communication skills. The transition wasn't easy, but it fostered a more collaborative and dynamic work environment.

   They did not stop there, Horizon Technologies adopted a Strategic Business Unit (SBU) structure, dividing the company into smaller, more manageable units. Each SBU was tasked with focusing on specific product lines. This decentralization empowered individual units to make

strategic decisions autonomously, leading to quicker market response and a deeper understanding of customer needs. It was the catalyst for innovation and improved customer satisfaction.

Post organizational changes, Horizon Technologies strategized to embrace a cost leadership strategy, positioning itself as the go-to brand for affordable yet high-quality electronics. By optimizing production processes and supply chain management, the company achieved cost efficiencies that competitors struggled to match. This not only attracted cost-conscious consumers but also enabled the company to maintain healthy profit margins.

As Horizon Technologies expanded into new international markets, the management recognized the importance of adapting to the local environment. Conducting a thorough PESTLE analysis (Political, Economic, Social, Technological, Legal, and Environmental) proved pivotal for navigating complex market dynamics. This analysis highlighted specific challenges, especially in understanding socio-cultural trends and regulatory differences across regions. By leveraging these insights, Horizon Technologies was able to overcome these obstacles, customizing its products, marketing strategies, and operations to align more effectively with local preferences and regulations, ultimately contributing to their success.

Through these strategic moves, Horizon Technologies experienced a remarkable transformation. Within two years, their market share had significantly grown in local markets, whereas the cost leadership strategy resonated strongly. Their annual revenue skyrocketed by 35%, and the company saw a 20% increase in its stock price. The business case for Horizon Technologies serves as an inspiration for companies navigating competitive and dynamic industries.

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

(i) In Horizon Technologies' journey towards globalization, PESTLE analysis played a pivotal role in navigating diverse international markets. Which aspect of PESTLE analysis proved to be the most challenging for Horizon Technologies?

(a) Socio-cultural factors, as they struggled to keep up with changing trends and cultural preferences.

(b) Legal factors, given the complex regulatory landscape in foreign markets.

(c) Environmental factors, with the need to adhere to varying sustainability standards.

(d) Technological factors, due to rapid changes in local technology preferences.

(ii) Horizon Technologies implemented a Strategic Business Unit (SBU) structure to improve its responsiveness and innovation. How did the SBU structure differ from the company's previous organizational model, and what benefits did this new structure bring?

(a) The SBU structure replaced a functional structure and empowered units to make strategic decisions. It led to quicker market response and enhanced customer satisfaction.

(b) The SBU structure replaced a matrix structure, improving vertical communication and reducing operational silos.

(c) The SBU structure maintained the existing functional structure but focused solely on cost-cutting measures.

(d) The SBU structure introduced a more centralized approach, ensuring consistent decision-making across units.

(iii) Horizon Technologies faced internal challenges, including leadership struggles with an authoritative CEO. How did Mr. Jonathan Mercer transform his leadership style to foster a more collaborative work environment, and what were the key outcomes of this transformation?

(a) Mr. Mercer increased his authoritative approach to drive quicker decision-making and efficiency.

(b) He introduced a strict top-down hierarchy to enhance discipline and order within the organization.

(c) Mr. Mercer invested in leadership development programs, enhancing interpersonal and communication skills, which resulted in a more collaborative and dynamic work environment.

(d) He delegated most of his responsibilities to middle managers, reducing his involvement in the company's daily operations.

(iv) While implementing a cost leadership strategy, Horizon Technologies went beyond just streamlining their production processes. What other factors did they consider achieving cost efficiencies, and how did this contribute to their success?

(a) They solely focused on reducing labor costs, resulting in job cuts and employee dissatisfaction.

(b) Horizon Technologies invested heavily in extravagant marketing campaigns to attract a premium customer base.

(c) They optimized supply chain management and invested in research and development, leading to enhanced product quality and reduced production costs.

(d) The company acquired competitors to eliminate competition and establish a monopoly in the market.

(v) The primary factor contributing to Horizon Technologies' remarkable transformation was their commitment to systematic analysis. What role did value chain analysis play in this transformation, and how did it drive their success in both local and global markets?

(a) Value chain analysis revealed opportunities for diversification, enabling them to cater to various market segments.

(b) It allowed the company to identify and eliminate inefficiencies in their operations, resulting in cost reductions and improved product quality.

(c) Value chain analysis highlighted the need for excessive vertical integration, helping them control the entire supply chain.

(d) Horizon Technologies used value chain analysis primarily for financial forecasting and budgeting.

2. In a recent strategy meeting, the leadership team of TechNova, a growing software development firm, emphasized the importance of defining the core purpose of the organization. They aimed to outline the primary reason for the company's existence and to guide their decision-making processes during challenging times. They noted that this central guiding declaration would help align the team's efforts and communicate to stakeholders what the company stands for. What term best describes the central guiding declaration that communicates the purpose and values of TechNova?

(a) Vision

(b) Mission

(c) Objectives

(d) Goals

3. A company's flagship product has experienced a plateau in sales despite heavy promotions and marketing. What phase of the Product Life Cycle are they likely in, and what is the best strategic option to consider?

(a) Introduction; increase prices

(b) Growth; diversify product range

(c) Maturity; seek product differentiation

(d) Decline; invest in new technology

4. A multinational corporation is planning a merger with a local firm in a developing country. The local firm's community has high stakes in maintaining local employment and environmental standards but possesses low power in formal negotiations. How should the corporation categorize this stakeholder?

(a) High power, low interest

(b) Low power, high interest

(c) High power, high interest

(d) Low power, low interest

5. EcoGreen, a company specializing in sustainable home products, has decided to enter the energy sector by developing and marketing solar panels and home energy storage solutions. This new direction involves creating a completely new product line that extends beyond their traditional home goods, thereby entering an industry with their current brand. What strategy is EcoGreen using to enter the energy sector?

(a) Market penetration

(b) Product development

(c) Market development

(d) Diversification

6. Alpha Corp is undergoing a shift to foster a culture that encourages innovative thinking and team collaboration. To achieve this, the company is focusing on how leaders interact with their teams and set examples for behavior, aiming to align leadership practices with desired cultural outcomes. Which aspect of AlphaCorp is being adjusted to foster a culture of innovation and collaboration?

(a) Structure

(b) Systems

(c) Skills

(d) Style

Descriptive Questions

Chapter 1-Introduction to Strategic Management

7. XYZ Enterprises operates in various sectors, including renewable energy solutions, organic skincare products, eco-friendly packaging, and smart home technologies. The organization is currently in the process of recruiting a Chief Executive Officer. In this scenario, imagine yourself as an HR consultant for XYZ Enterprises. Identify the strategic level that encompasses this role within XYZ Enterprises. Provide an overview of the key duties and responsibilities falling under the Chief Executive Officer's scope.

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. Mr. Arun Kumar has built a successful business in the handmade ceramic products industry in Gujarat. His company, CeramiCrafts, is renowned for crafting distinctive, high-quality ceramic home décor items that have gained a strong foothold in the market. However, recent market shifts and rising competition have impacted sales. Seeking professional guidance, Mr. Kumar consults a strategic advisor who recommends an in-depth analysis of the competitive landscape. To comprehend the competitive landscape, what steps should Mr. Kumar follow?

10. According to Michael Porter, what are the five competitive forces that exist within an industry?

Chapter 3-Strategic Analysis: Internal Environment

11. ABC Corporation, a leading manufacturer of consumer electronics, is considering launching a new line of smart home devices. As a strategic manager, conduct a SWOT analysis for ABC Corporation to assess the feasibility and potential success of this new venture. Consider both internal and external factors that could impact on the success of the new product line.

12. What are channels? Why is channel analysis important? Explain the different types of channels?

Chapter 4-Strategic Choices

13. InnovaTech, a technology company with a range of business units, is assessing its investment opportunities. To allocate resources effectively, InnovaTech uses a matrix that evaluates each business unit based on two key factors: **industry attractiveness** and **business unit strength**. For example, the AI solutions division, positioned in a highly attractive industry with a strong competitive edge, receives a "go ahead" for further investment. In contrast, its legacy software division, operating in a less attractive industry with a weaker position, receives a "be careful" rating, suggesting limited investment. Identify and explain which analytical tool InnovaTech is using for this evaluation.

14. What do you understand by Strategic Alliance? Discuss its advantages.

Chapter 5-Strategy Implementation and Evaluation

15. EcoTec, a company specializing in sustainable technology solutions, is facing challenges due to shifts in environmental regulations and market preferences. To manage these uncertainties, they regularly review and update their business assumptions and strategic plans based on changing regulatory environments and consumer trends. This proactive approach helps them stay aligned with evolving market conditions and maintain a competitive edge. Explain which approach is EcoTech to adapt to changes in regulations and market conditions?

16. **GloWare Ltd.**, an apparel manufacturer, has been in the market for over a decade. Until 2023, it operated on the founding principles of its CEO, focusing on a limited regional market. With new growth opportunities arising, GloWare is now interested in developing new competencies in areas such as digital marketing, product innovation, sustainable materials, and financial management. Recognizing that changing one area may impact others, the company wants a comprehensive understanding of the interconnected elements that contribute to its operational effectiveness.

    As a strategist, you are tasked with creating a questionnaire to analyze both the "hard" and "soft" elements of the organization. This assessment will enable GloWare to understand the factors that influence its effectiveness and to strategically align its structure, skills, and culture with its growth ambitions.

SUGGESTED ANSWERS/HINTS

MCQ No.	Answer	
1.	(i)	(a)
	(ii)	(a)
	(iii)	(c)
	(iv)	(c)
	(v)	(b)

2.		**(b)**
3.		**(c)**
4.		**(b)**
5.		**(d)**
6.		**(d)**

7. The Chief Executive Officer (CEO) position within XYZ Enterprises operates at the **Corporate Level.** This executive level is key in leading the overall direction, performance, and success of the entire organization. The CEO assumes a central role in shaping the company's strategic vision, overseeing diverse business sectors, and ensuring alignment with organizational goals.

Key Duties and Responsibilities of the CEO:

The CEO's role encompasses various strategic responsibilities at the Corporate Level, involving:

1. **oversee the development** of strategies for the whole organization;
2. **defining the mission and goals** of the organization;
3. **determining what businesses**, it should be in;
4. **allocating resources** among the different businesses;
5. **formulating, and implementing** strategies that span individual businesses;
6. **providing leadership** for the organization;
7. ensuring that the corporate and business level strategies which company pursues are consistent with **maximizing shareholders wealth**; and
8. managing the **divestment and acquisition** process.

Given the diverse nature of XYZ Enterprises, including renewable energy solutions, organic skincare products, eco-friendly packaging, and smart home technologies, the CEO's responsibilities are tailored to navigate the unique challenges and opportunities presented by each sector. In conclusion, the CEO at the Corporate Level plays a critical role in guiding

XYZ Enterprises strategically, ensuring cohesive leadership, and driving sustainable success across its diverse business domains.

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. Understanding the competitive landscape is crucial for Mr. Arun Kumar to navigate the handmade ceramic products industry in Gujarat successfully. This involves identifying both direct and indirect competitors while gaining insights into their vision, mission, core values, niche markets, and strengths and weaknesses. Here are the structured steps Mr. Kumar should follow to comprehend the competitive landscape and bolster his strategic position:

(i) **Identify the competitor:** The first step to understanding the competitive landscape is to identify the competitors in the

handmade ceramic products industry. Mr. Kumar should gather actual data on the market share and positioning of competitors within the industry.

(ii) **Understand the competitors:** Once the competitors have been identified, Mr. Kumar can use market research reports, the internet, newspapers, social media, industry reports, and various other sources to understand the products and services offered by competitors. This will help him comprehend how they position themselves in different markets and their unique selling propositions.

(iii) **Determine the strengths of the competitors:** Mr. Kumar should assess what the competitors excel at. Do they offer superior product quality? Are they using marketing strategies that reach a wider customer base? Why do consumers choose them over others? Understanding these strengths will help Mr. Kumar identify areas where his company, CeramiCrafts, can enhance its offerings.

(iv) **Determine the weaknesses of the competitors:** Weaknesses of competitors can be identified by reviewing customer feedback, consumer reports, and reviews. Consumers often share their experiences, especially when products or services are either exceptional or subpar. By examining these weaknesses, Mr. Kumar can find opportunities to position CeramiCrafts as a better alternative.

(v) **Put all of the information together:** At this stage, Mr. Kumar should consolidate all the information gathered about competitors. This will help him identify gaps in the market that his company can fill, as well as areas where CeramiCrafts needs to improve. By understanding the competition thoroughly, he can devise strategies that strengthen his market position.

By following these steps, Mr. Kumar can gain a comprehensive understanding of the competitive landscape, enabling him to make informed strategic decisions for CeramiCrafts. This tailored approach ensures that the insights gained are directly applicable to the handmade ceramic products industry in Gujarat.

10. Michael Porter's Five Forces model is a widely utilized tool for systematically analyzing the competitive forces within an industry. The model identifies five competitive forces that shape the overall competitive landscape:

- **Threat of New Entrants:** New entrants bring added capacity and product variety, intensifying competition and impacting prices. The size of new entrants magnifies their competitive influence, placing constraints on prices and affecting existing players' profitability.
- **Bargaining power of Buyers:** The ability of buyers to form groups or cartels influences their bargaining power. This force, particularly in industrial products, impacts pricing and often leads to demand for better services, influencing costs and investments for producers.
- **Bargaining power of Suppliers:** Suppliers with specialized offerings exert significant bargaining power, especially when limited in number. Supplier bargaining power determines raw material costs, affecting industry attractiveness and profitability.
- **Rivalry among Current Players:** Existing players engage in competition, influencing strategic decisions across various levels. This rivalry is evident in pricing, advertising, cost pressures, and product strategies, impacting the overall competitive landscape.
- **Threats from Substitutes:** Substitute products can alter an industry's competitive dynamics, offering price advantages or performance improvements. Substitutes limit prices and profits, and industries with substantial R&D investments are particularly susceptible to threats from substitute products.

These forces collectively determine industry's attractiveness and profitability by influencing factors such as costs and investments required for industry participation. The strength of these forces varies across industries, ultimately shaping the potential for earning attractive profits.

11. SWOT Analysis for ABC Corporation's New Smart Home Devices Venture:

Strengths	**Weaknesses**
• Strong brand reputation in consumer electronics.	• Limited experience in the smart home devices market.
• Established distribution network.	• May require additional investments in research and development.
• Access to technological expertise for product development.	• Potential challenges in integrating a new product line with existing offerings.
• Financial resources to support product launch and marketing.	• Lack of established customer base for smart home devices.
Opportunities	**Threats**
• Growing market for smart home devices due to increasing consumer interest in home automation.	• Intense competition from established players in the smart home devices market.
• The possibility of partnering with existing smart home platform providers.	• Rapid technological advancements lead to short product life cycles.
• Potential to leverage brand loyalty from existing customers.	• Potential for cybersecurity threats in connected devices.
• Ability to differentiate through innovative features and design.	• Economic factors impacting consumer spending on discretionary items.

The SWOT analysis highlights that while ABC Corporation has several strengths that can support the launch of a new smart home devices line, there are also significant weaknesses and threats to consider. To maximize the chances of success, ABC Corporation should focus on leveraging its brand reputation and distribution network while carefully addressing the weaknesses and threats identified. Additionally, being informed about technological developments and consumer trends will be essential for maintaining competitiveness in the dynamic smart home devices market.

12. Channels represent the **distribution system** through which organizations distribute their products or provide services to customers. They play a pivotal role in reaching target markets, maximizing sales, and establishing competitive advantages.

Channel analysis is important when the business strategy is to scale up and expand beyond the current geographies and markets. When a business plans to grow to newer markets, they need to develop or leverage existing channels to get to new customers. Thus, analysis of channels that suit one's products and customers is of utmost importance.

There are typically three channels that should be considered: sales channel, product channel and service channel.

- **The sales channel** - These are the intermediaries involved in selling the product through each channel and ultimately to the end user. The key question is: Who needs to sell to whom for your product to be sold to your end user? **For example**, many fashion designers use agencies to sell their products to retail organizations, so that consumers can access them.
- **The product channel** - The product channel focuses on the series of intermediaries who physically handle the product on its path from its producer to the end user. This is true of Australia Post, who delivers and distributes many online purchases between the seller and purchaser when using eBay and other online stores.

- **The service channel** - The service channel refers to the entities that provide necessary services to support the product, as it moves through the sales channel and after purchase by the end user. The service channel is an important consideration for products that are complex in terms of installation or customer assistance. **For example**, a Bosch dishwasher may be sold in a Bosch showroom, and then once sold it is installed by a Bosch contracted plumber.

13. InnovaTech is using the **GE Matrix**, a strategic tool designed to assess the resource allocation needs of different business units based on two factors: **industry attractiveness** and **business unit strength**. This matrix is a nine-cell grid that helps companies prioritize investments by categorizing units into "grow," "hold," or "harvest" zones, depending on their positions within the matrix.

For InnovaTech, the **AI solutions division**, which operates in a highly attractive industry with a strong competitive position, falls into the "grow" category, meriting further investment. Meanwhile, the **legacy software division** operates in a less attractive industry with weaker positioning, likely placing it in the "harvest" or "hold" category, where investments are minimized.

The GE Matrix enables companies like InnovaTech to systematically evaluate each business unit's potential, optimize resource allocation, and focus on divisions that align with long-term growth and profitability goals.

14. A strategic alliance is a relationship between two or more businesses that enables each to achieve certain strategic objectives which neither would be able to achieve on its own. The strategic partners maintain their status as independent and separate entities, share the benefits and control over the partnership, and continue to make contributions to the alliance until it is terminated. The advantages of strategic alliance can be broadly categorised as follows:

(a) **Organizational:** Strategic alliance helps to learn necessary skills and obtain certain capabilities from strategic partners. Strategic

partners may also help to enhance productive capacity, provide a distribution system, or extend supply chain.

(b) **Economic:** There can be reduction in costs and risks by distributing them across the members of the alliance. Greater economies of scale can be obtained in an alliance, as production volume can increase, causing the cost per unit to decline. The partners can also take advantage of co-specialization, creating additional value.

(c) **Strategic:** Rivals can join together to cooperate instead of competing. Strategic alliances may also be useful to create a competitive advantage by the pooling of resources and skills. This may also help with future business opportunities and the development of new products and technologies. Strategic alliances may also be used to get access to new technologies or to pursue joint research and development.

(d) **Political:** Sometimes strategic alliances are formed with a local foreign business to gain entry into a foreign market either because of local prejudices or legal barriers to entry.

15. EcoTech is using **Premise Control** to adapt to changes in regulations and market conditions. Premise Control is a strategic management approach focused on continuously monitoring and reviewing the underlying assumptions that form the basis of an organization's strategy. By regularly assessing these assumptions—such as environmental regulations and consumer preferences, EcoTech ensures that its strategic plans remain relevant and responsive to external changes. This proactive process helps the company make timely adjustments to its strategies, allowing it to stay competitive and aligned with the evolving market environment.

16. In addressing the strategic needs of **GloWare Ltd.**, the **McKinsey 7-S Model** serves as a valuable tool. This model examines how various "hard" and "soft" elements within the organization interact, with the understanding that modifying one aspect can create a ripple effect on other elements, helping to maintain a balanced and effective organizational structure. By analyzing these elements, **GloWare** can gain

insights into its organizational design and make strategic adjustments to improve performance.

The McKinsey 7-S Model categorizes elements into **hard** and **soft** components:

Hard Elements (directly managed by the company):

1. **Strategy**: The organization's direction and competitive approach, designed to leverage core competencies and achieve industry leadership.
2. **Structure**: The chosen organizational setup, shaped by resource availability and the degree of centralization or decentralization desired by management.
3. **Systems**: The daily operations, processes, and teams that execute objectives in an efficient and effective manner.

Soft Elements (influenced by organizational culture and more challenging to define):

1. **Shared Values**: Core beliefs that shape the culture and ethical code within the organization.
2. **Style**: Leadership style and its impact on decision-making, employee motivation, and goal delivery.
3. **Staff**: The talent pool and workforce capabilities.
4. **Skills**: The key competencies of employees that contribute to organizational success.

While the McKinsey 7-S Model provides a structured approach to analyzing organizational effectiveness, it has certain limitations:

1. **Limited Focus on External Environment**: The model focuses only on internal elements, potentially overlooking external factors impacting the organization.
2. **Undefined Organizational Effectiveness**: It does not clearly explain how to measure or achieve organizational effectiveness.

3. **Static Nature**: The model is considered more static and may lack flexibility in dynamic decision-making situations.

4. **Potential Gaps in Strategy Execution**: It may not fully capture gaps between strategy development and execution.

By applying the McKinsey 7-S Model, **GloWare Ltd.** can gain a comprehensive understanding of the interconnected elements within its organization and how they impact overall performance. Insights gathered from a questionnaire based on this model can inform strategic decisions, allowing **GloWare** to enhance growth, operational efficiency, and competitiveness in a changing market.