INTERMEDIATE COURSE

GROUP – II

REVISION TEST PAPERS

MAY, 2025

BOARD OF STUDIES (ACADEMIC)

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

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REVISION TEST PAPER, MAY 2025 – OBJECTIVE & APPROACH

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

I. Objective of Revision Test Paper

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

The primary objectives of the RTP are:

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

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

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

Live Virtual Classes by renowned subject experts conducted free of charge for the students of Foundation, Intermediate and Final levels provide the students much required support in preparing for their exams conveniently at home as these classes can be accessed live or viewed later as recorded lectures through hand-held devices such as smart phones, laptops, I-pads, tablets, etc. anytime anywhere. Further, students are advised to attempt the Multiple-Choice Questions (MCQs) at MCQ Paper Practice Portal which is a holistic platform for self-assessment within the stipulated timeframe.

Students are welcome to send their suggestions for fine tuning the RTP to the Joint Director, Board of Studies, 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 20 questions: Division A (Case scenario and caselet based MCQs) which contains 7 case scenarios and caselets and Division B (Descriptive questions) which contains 13 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	Bifurcation of different costs.
2.	Activity Based Costing	Calculation of cost and operating income.
3.	Employee Cost	Calculation of labour cost under Bonus system.
4.	Cost Accounting System	Journal Entry.
5.	Process Costing	Calculation of abnormal gain/loss.
6.	Joint product and By product	Calculation of number of unit, normal loss, abnormal gain.
7.	Marginal Costing	Calculation of break-even point.
	Division B	
8.	Material Cost	Calculation of EOQ and acceptance of offer.
9.	Employee Cost	Calculation of earnings and allocation of cost to different jobs.
10.	Overheads	Computation of overhead rate and Preparation of comparative statement.
11.	Cost Sheet	Preparation of Statement of Cost along with P&L.
12.	Cost Accounting System	Preparation of Accounts.
13.	Job and Batch Costing	Preparation of Job cost sheet.
14.	Process Costing	Preparation of Process accounts
15.	Joint product and By product	Calculation of cost per unit and total operation profit/loss.
16.	Service Costing	Calculation of rent to be charged.
17.	Standard Costing	Calculation of missing data and material variances.

18.	Marginal Costing	Calculation of breakeven point and analysis of prediction.
19.	Budget and Budgetary Control	Preparation of statement to show classification of cost and Flexible budget.
20(a)	Introduction to Cost and Management Accounting	Product cost and purpose for its calculation.
20(b)	Service Costing	Operating costing and its features.
20(c)	Joint product and By product	Apportionment of joint cost upto point of separation.
20(d)	Different Cost	Explain different costs.

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

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

PAPER – 6: FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT

Section – A: Financial Management

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

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

Q. No.	Topic	About the Problem
	Division A	
1.	Investment Decision	Analysis of two machines.
2.	Cost of Capital	Calculation of cost of equity.
3.	Leverage	Effect of leverage.
	Division B	
4.	Ratio Analysis	Preparation of Balance Sheet.
5.	Cost of Capital	Calculation of WACC.
6.	Capital Structure	Analysis of two financial plans.
7.	Leverage	Calculation of leverages, PV ratio, ROCE, EPS and analysis of leverages.
8.	Dividend Decision	Calculation of market price using Gordon's model and Walter's model.

9.	Working Capital	Preparation of working capital statement and advise on continuation of export business.
10(a)	Scope and Objectives of Financial Management	Wealth maximisation v/s profit maximisation objective.
10(b)	Types of Financing	Methods of venture capital financing.

Section – B: Strategic Management

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

Integrated

1. Mr. Linde is a German national, who came to India again on 1st April, 2024. He represents his company and wants to start business in India as well. His company expertise in the manufacturing of Industrial machines. Recently launched "Make in India" movement has motivated Mr. Linde thinks that this might be the perfect opportunity for his company to establish his company in India.

   Last, Mr. Linde came to India on 1st April, 2012. He purchased a land for ₹ 50,00,000 and constructed a building by spending ₹ 16,00,000. After that he opened a Private limited company in that building. He spent another ₹ 2,80,000 for this. He also employed 3 people for survey and to understand the need of Indian customers and spent ₹ 1,50,000 in salaries.

   He was disappointed in the response of market, who were importing everything from China back then. He closed the office & went back to Germany. All these years the office was closed and only an amount of ₹ 12,500 per month was paid to a guard and property tax was also paid. Property tax was paid on an average of ₹ 18,000 per year.

   Now when Mr. Linde is back, he opens the office and starts to plan on how this time he will capture the Indian market.

   Expenses started to incur as soon as the office opened:

- Salaries of staff ₹ 2,50,000 per month.
- Electricity, water, & maintenance of office at ₹ 50,000 per month.
- Security staff at ₹ 15,000 per month.

Linde plans to purchase a land in Manesar which will be used for the factory. After a search he found an appropriate land and purchased a land for ₹ 1.50 crores. He handed over the land to a SPV company of a REIT to build a state of the art facility for their factory. Factory will be built in 2 years. They will spend ₹ 85 lacs each year for this construction.

Linde, back in the Noida office, made 3 departments:

(1) Office and administration

(2) Sales and marketing

(3) Account and Finance

Expenses for these departments (except for salaries) are expected to be:-

- Office and administration = ₹ 95,000 per year
- Sales and marketing = ₹ 1,12,000 per year
- Accounts and Finance = ₹ 88,000 per year

Office overheads are to be bifurcated in these departments on the basis of their individual spending ratio.

Technology is developed in Germany but at present its execution is not required. Therefore, they do not require any expert as of now and also because the factory is not ready.

Mr. Linde, being the only person representing his company and lone German in the Indian office feels difficult to manage everything as he finds Indian corporate environment very challenging. He asked his company to deploy another German manager to India. This will cost the company additional two million Indian national rupee per year to relocate this additional manager in India. The German management is divided on this decision. The ones who disagree say “Mr. Linde is competent enough to run a small extension of our company in India. We will allocate more resources to Indian subsidiary when actual operations will start, till then everything can be managed by Mr. Linde alone. Right

Indian Company is itself a cost centre and we are already paying him 3.5 million INR annually, therefore we are not ready to invest until it starts generating revenue".

Linde has another opportunity to relocate the head office, also, to Manesar, where the factory building is being constructed. The distance between head office and factory will reduce greatly, which will be highly beneficial when the factory will become operative. He will have to sale the old office in Noida, which will be sold at ₹ 2.50 crores and purchase a ready-made building in Manesar for ₹ 3.75 crores. This new building will have larger space that can accommodate the future needs for space, when company will grow. It seems to be like perfect investment opportunity to Linde.

Expenses in this new building are expected to be:-

- Salaries of staff ₹ 3,00,000 per month
- Electricity, water, & maintenance of office at ₹ 80,000 per month.
- Security at ₹ 30,000 per month.

Indexed cost of building in Noida is ₹ 2.25 crores and tax on long-term capital gain is 12.5%.

On the basis of above information, answer the following 5 MCQs:

i. Find out an avoidable cost till the factory becomes operative. What is its value?

(a) 20,00,000

(b) 49,20,000

(c) 98,40,000

(d) 40,00,000

ii. Find out the total of Sunk and shut down cost in the given case study. Select the correct option from below.

(a) 4,30,000

(b) 70,30,000

(c) 24,46,000

(d) 90,46,000

iii. What is total out-of-pocket cost for the company in Noida branch, after factory land in Manesar is purchased, till the factory operation begins?

(a) 3,21,50,000

(b) 1,51,50,000

(c) 81,50,000

(d) 40,75,000

iv. What will be out of pocket expenses incurred in relocation of Head office to Manesar?

(a) 3,75,00,000

(b) 1,28,12,500

(c) 1,25,00,000

(d) 4,24,20,000

v. How much is the unexpired cost of the Noida office as on 1st October, 2024, if salaries to all the employees are paid till 31st March, 2025?

(a) 33,40,000

(b) 30,00,000

(c) 15,90,000

(d) 15,00,000

Activity based Costing

2. The HomeMart is the latest trending brand offering home improvement appliances with broadest selection of products with highly competitive prices. The sale is increasing year by year with huge multiples. Current year also the sales reached triple the last year. The reason being company having good customer support where it provides after sales assistance over phone per item sold. Though it costs only Re. 1 per item sold to the company, it enhanced to ₹ 49,15,200 last year making a huge impact on the total support cost.

All the company's appliances have been majorly categorised into three product lines namely Fancy fans, Home decors, Assembled furniture. During the current year, the company's revenue as generated is ₹ 3,80,88,000, ₹ 10,08,28,800 and ₹ 5,80,75,200 respectively. However, the cost of god sold is ₹ 2,88,00,000, ₹ 7,20,00,000 and ₹ 4,32,00,000 respectively.

In business, there's a saying "The packaging sells the product the first time, but what's inside sells the product a second time". Following the saying, the company has the policy of taking back the cartons of the products sold relating to Fancy fans to reduce the packaging cost. However, for smooth returning of cartons, the company has to incur certain carrier cost on its own which is ₹ 5,76,000 for the current year and allocating the same directly to the said product.

Some other information relating to each of the product lines is provided below:

	Fancy fans	**Home decors**	**Assembled furniture**
Items sold	12,09,600	1,05,98,400	29,37,600
Number of deliveries received	600	4,380	1,320
Number of purchase orders placed	720	1,680	720
Hours of shelf-stocking time	1,080	10,800	5,400

The company also provides the following basis of cost allocation:

Activity	**Description of activity**	**Total Cost**	**Cost-allocation base**
Delivery	Physical delivery and receipt of products	1,20,96,000	6,300 deliveries
Ordering	Placing of orders for purchases	74,88,000	3,120 purchase orders

Shelf stocking	Stocking of products in warehouse	82,94,400	17,280 hours of shelf-stocking time

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

i. The total support cost and its percentage to the cost of goods sold would be:

(a) ₹ 3,33,69,600 and 23.17%

(b) ₹ 4,32,00,000 and 30%

(c) ₹ 3,33,69,600 and 30%

(d) ₹ 4,32,00,000 and 23.17%

ii. Operating income as a percentage of revenues of each product line, namely Fancy fans, Home decors, Assembled furniture, when all the support costs are allocated on the basis of cost of goods sold would be:

A. 6.87%, 12.05% and 8.38% respectively

B. 12.05%, 6.87% and 8.38% respectively

C. 1.70%, 7.17% and 3.30% respectively

D. 7.17%, 3.30% and 1.70% respectively

iii. The cost driver rate relating to Delivery, Ordering, Shelf stocking and Customer support would be:

(a) Delivery- ₹ 1,920 per delivery, Ordering- ₹ 2,400 per purchase order, Shelf stocking- ₹ 480 per stocking hour and Customer support- Re. 1 per item sold

(b) Delivery- ₹ 2,400 per delivery, Ordering- ₹ 1,920 per purchase order, Shelf stocking- ₹ 480 per stocking hour and Customer support- Re. 1 per item sold

(c) Delivery- ₹ 1,920 per delivery, Ordering- ₹ 2,400 per purchase order, Shelf stocking- ₹ 480 per stocking hour and Customer support- ₹ 3 per item sold

(d) Delivery- ₹ 480 per delivery, Ordering- ₹ 2,400 per purchase order, Shelf stocking- ₹1,920 per stocking hour and Customer support- ₹ 3 per item sold

iv. Operating income of each product line, namely Fancy fans, Home decors, Assembled furniture, when all the support costs are allocated using an activity-based costing system would be:

(a) ₹ 16,84,800, ₹ -2,05,92,000 and ₹ -7,92,000 respectively

(b) ₹ 3,64,03,200, ₹ 12,14,20,800 and ₹ 5,88,67,200 respectively

(c) ₹ 92,88,000, ₹ 2,88,28,800 and ₹ 1,48,75,200 respectively

(d) ₹ 41,04,000, ₹ 6,04,800 and ₹ 50,83,200 respectively

v. Operating income as a percentage of revenues of each product line, namely Fancy fans, Home decors, Assembled furniture, when all the support costs are allocated using an activity-based costing system would be:

(a) 4.42%, -20.42% and -1.36% respectively

(b) 10.78%, 0.60% and 8.75% respectively

(c) 24.39%, 28.59% and 25.61% respectively

(d) 4.39%, 8.59% and -1.36% respectively

Employee Cost and Direct Expenses

3. Mr. A works in a manufacturing company where he is paid bonus according to the Halsey 50% plan, besides the normal wages. The relevant data is as below:

Time Rate (per hour)	₹ 100
Time allowed	10 hours
Time taken	5 hours
Time saved	5 hours

Mr. A believes that his bonus under Halsey system is getting reduced by 50%, thus intending to shift towards Rowan Premium Plan.

You are required to CALCULATE the total earnings of Mr. A as per Halsey plan and Rowan Premium plan & ENUMERATE the reason for difference in both the earnings.

(a) Total earnings as per Halsey plan- ₹ 500 and as per Rowan Premium plan- ₹ 750. Earnings under Halsey Plan is lower than that of Rowan Premium plan as the bonus is getting reduced by 50%.

(b) Total earnings as per Halsey plan- ₹ 750 and as per Rowan Premium plan- ₹ 500. Earnings under Rowan Premium plan is lower than that of Halsey plan as the actual time taken is 50% of the time allowed.

(c) Total earnings as per Halsey plan- ₹ 750 and as per Rowan Premium plan- ₹ 750. When the actual time taken is 50% of the time allowed, the earnings under Halsey and Rowan Plans are equal.

(d) Total earnings as per Halsey plan- ₹ 250 and as per Rowan Premium plan- ₹ 250. Total earnings under both the Plans are equal as the time taken under both the plans are same.

Cost Accounting Systems

4. WHICH of the following is the correct journal entry as would appear in the cost books when Material (Direct) is issued to production?

(a)	Store Ledger Control A/c	Dr.	xxx	
	To Work-in-Process Control A/c			xxx
(b)	Store Ledger Control A/c	Dr.	xxx	
	To Production Overhead Control A/c			xxx
(c)	Production Overhead Control A/c	Dr.	xxx	
	To Store Ledger Control A/c			xxx
(d)	Work-in-Process Control A/c	Dr.	xxx	
	To Store Ledger Control A/c			xxx

Process & Operation Costing

5. A product passes through two processes. The output of Process-I is treated as the raw material of Process-II. The cost incurred at Process- II is as follows:

Particulars	Process-II (₹)
Transferred from Process-I A/c	27,85,700
Materials issued	10,00,000
Labour	2,00,000
Manufacturing overhead	5,00,000

The output of each process is as under:

Process	Output	Normal Loss
Process-I	48,750 units	2%
Process-II	47,000 units	5%

No stock of materials or of work-in-process was left at the end.

You are required to CALCULATE the value of Abnormal Gain/Loss in Process-II A/c.

(a) Abnormal Gain of ₹ 66,626

(b) Abnormal Loss of ₹ 66,626

(c) Abnormal Gain of ₹ 72,776

(d) Abnormal Loss of ₹ 72,776

Joint Products and By products

6. Sterling Industries manages various manufacturing processes. In process I, joint products P1 and P2 are produced in the ratio of 6:4 in units from the raw material input. A normal loss of 2% of the raw material input is expected in this process, with losses having a realizable value of ₹ 12.5 per kg. The company has no work in progress. The joint costs are apportioned between the joint products using the physical measure basis.

The following information relates to process I for last month:

Raw materials input	75,000 kg (at a cost of ₹ 4,76,250)
Direct labour	₹ 2,25,000
Direct expenses	₹ 67,500
Production Overheads	110% of direct labour cost
Abnormal gain	1,250 kg

You are required to CALCULATE the number of unit and its value of the Normal loss, Abnormal gain and joint products P1 & P2.

(a) Normal loss: 1,500 units ₹ 16,964; Abnormal gain: 1,250 units ₹ 18,750; Product P1: 44,850 units ₹ 6,08,678 and Product P2: 29,900 units ₹ 4,05,786.

(b) Normal loss: 1,250 units ₹ 18,750; Abnormal gain: 1,500 units ₹ 16,964; Product P1: 44,850 units ₹ 6,08,678 and Product P2: 29,900 units ₹ 4,05,786.

(c) Normal loss: 1,500 units ₹ 18,750; Abnormal gain: 1,250 units ₹ 16,964; Product P1: 44,850 units ₹ 6,08,678 and Product P2: 29,900 units ₹ 4,05,786.

(d) Normal loss: 1,500 units ₹ 18,750; Abnormal gain: 1,250 units ₹ 16,964; Product P1: 44,850 units ₹ 4,05,786 and Product P2: 29,900 units ₹ 6,08,678.

Marginal Costing

7. PR Ltd. sells two types of pen, ball pen and gel pen. Currently, the company is expecting to sell 6,000 units of ball pen along with 3,600 units of gel pen in the coming month. Other information as forecasted is provided below:

Particulars	**Ball pen**	**Gel pen**
Selling price (per unit)	₹ 150	₹ 100
Variable cost (per unit)	₹ 90	₹ 60
Contribution (per unit)	₹ 60	₹ 40
Fixed Costs		₹ 3,36,000

You are required to CALCULATE the Composite Break-even Batch and individual break-even of the pens (in units).

(a) Composite Break-even Batch- 6,400 batches, Break-even units of Ball pen- 4,000 units, Break-even units of Gel pen- 2,400 units.

(b) Composite Break-even Batch- 800 batches, Break-even units of Ball pen- 500 units, Break-even units of Gel pen- 300 units.

(c) Composite Break-even Batch- 800 batches, Break-even units of Ball pen- 4,000 units, Break-even units of Gel pen- 2,400 units.

(d) Composite Break-even Batch- 6,400 batches, Break-even units of Ball pen- 500 units, Break-even units of Gel pen- 300 units.

PART-II Descriptive Questions

Material Cost

8. Catalist Ltd. is a distributor of industrial chemicals, providing the chemical in drum packaging.

Each drum of the chemical costs ₹ 200 from a supplier and the company sells it for ₹ 240.

Annual demand is estimated to be for 2,50,000 drums.

The cost of delivery is estimated at ₹ 100 per order and the annual variable holding cost per drum at ₹ 180 plus 10% of purchase cost.

Based on above data, the managing director calculates the economic order quantity and suggests that it should serve as the foundation for purchasing decisions in upcoming periods.

However, the purchasing manager states that the managing director has ignored his share of bonus of 10% of the amount by which total annual inventory holding and order costs (before such remuneration) are below ₹ 2,00,000. He further points out that the suppliers also offer quantity discounts on purchase orders, i.e. if the order size is 1,000 drums or above, the price per drum is only ₹ 199.60, compared to ₹ 200 when an order is between 500 and 999 drums.

You are required to:

(i) CALCULATE the economic order quantity as calculated by the company's managing director.

(ii) COMMENT whether Catalist Ltd. can look forward to the quantity discount offered for purchasing 1,000 drums, after CALCULATING total cost considering purchasing manager's bonus along with supplier quantity discounts.

Employee Cost and Direct Expenses

9. Pi and Qu are part of a manufacturing team that handles multiple jobs within the production process. Detailed description of their respective monthly wages is provided below:

The standard working hours for the month are 210. Overtime is compensated at twice the sum of basic wages and dearness allowance. The employer's contributions to State Insurance and the Provident Fund are equal to the employees' contributions. Employees Pi and Qu were assigned to jobs A, S, and D in the following proportions:

Particulars		Pi	Qu
(i)	Basic Wages (₹)	12,000	15,000
(ii)	Dearness Allowance	50%	50%
(iii)	Contribution to provident Fund (on basic wages)	10%	10%
(iv)	Contribution to Employee's State Insurance (on basic wages)	1.75%	1.75%
(v)	Overtime (Hours)	8	--

Jobs	A	S	D
Worker Pi	30%	30%	40%
Worker Qu	30%	50%	20%

Overtime was done on job S.

You are required to CALCULATE the earnings of Pi and Qu and allocate the employee cost to each job A, S, and D.

Overheads- Absorption Costing Method

10. X Corp. produces two products, X and Y. The production division is made up of two manufacturing departments, P1 and P2, along with two support departments, S1 and S2.

Pre-determined Overhead Rates are applied in the production departments to allocate factory overhead costs to the products. The rate for Department P1 is determined by direct machine hours, while Department P2's rate is based on direct labor hours.

A technical assessment of the apportionment of expenses of service departments is as under:

	Production Department	
	P_1	P_2
Service Dept. 'S_1' (ratio)	3	3
Service Dept. 'S_2' (ratio)	30	15

Following budgeted data is available:

Factory overheads for the year:

Production Departments		Service Departments	
P_1	P_2	S_1	S_2
₹ 2,80,50,000	₹ 2,39,25,000	₹ 66,00,000	₹ 49,50,000

Details relating to production of the Products X and Y is as follows:

	Products	
	X	Y
Budgeted output (units)	1,00,000	60,000
Budgeted raw-material cost per unit (All materials are used in Department P_1 only.)	₹ 660	₹ 825

Budgeted time required for production per unit	P_1: 1.5 machine hours P_2: 2 Direct labour hours	P_1: 1.0 machine hours P_2: 2.5 Direct labour hours
Average wage rate budgeted in Department P_2	₹ 396 per hour	₹ 412.50 per hour

Following actual data is available (for the month of December, 2024):

	Products	
	X	**Y**
Actual output (units)	8,000	6,000
Actual hours worked for production	P_1: 12,200 machine hours P_2: 16,400 Direct labour hours	P_1: 8,300 machine hours P_2: 14,800 Direct labour hours
Raw materials cost	₹ 53,79,000	₹ 50,16,000
Wages paid	₹ 65,10,900	₹ 60,72,000

Actual factory overheads incurred is as follows:

Production Departments		**Service Departments**	
P_1	**P_2**	**S_1**	**S_2**
₹ 25,41,000	₹ 22,44,000	₹ 6,60,000	₹ 5,28,000

You are required to:

(i) COMPUTE the pre-determined overhead rate for department P1 and P2.

(ii) PREPARE a comparative statement reflecting Budgeted cost and Actual cost for production of the Products X and Y during the month of December, 2024.

(iii) CALCULATE the amount of under/ over-absorption of production overheads

Cost Sheet

11. (a) The figures listed below are derived from the Trial Balance of EVS & Co. as of 31st March:

	Dr. (₹)	Cr. (₹)
Opening Inventories:		
Finished Stock	10,96,000	
Raw Materials	19,18,000	
Work-in-Process	27,40,000	
Office Appliances	2,38,380	
Plant & Machinery	63,08,850	
Building	27,40,000	
Sales		1,35,21,600
Sales Return and Rebates	1,91,800	
Cash discount allowed on sales	1,17,820	
Materials Purchased	43,84,000	
Freight incurred on Materials	2,19,200	
Purchase Returns		65,760
Direct employee cost	21,92,000	
Indirect employee cost	2,46,600	
Drawing and Designing cost	1,37,000	
Repairs and maintenance of factory	1,91,800	
Heat, Light and Power expenses	8,90,500	
Pollution Control Expenses	2,56,190	
Sales Commission	4,60,320	
Sales Promotion	3,08,250	
Distribution Deptt. - Salaries and Expenses	2,46,600	
Office - Salaries and Expenses	1,17,820	
Packing Cost to make the product marketable	3,15,100	

Printing and Stationery expenses	89,050	
Bank Charges paid	8,220	

Further details are available as follows:

(i)	**Closing Inventories:**	
	Finished Goods	₹ 15,75,500
	Raw Materials	₹ 24,66,000
	Work-in-Process	₹ 26,30,400
(ii)	Outstanding direct employee cost	₹ 1,09,600
(iii)	Depreciation to be provided on:	
	Office Appliances	15%
	Plant and Machinery	40%
	Buildings	10%
(iv)	70% of the Heat, Light and Power expenses is related to the Factory and the remaining 30% is equally shared between the Office and Selling Department.	
	Depreciation on Buildings is to be distributed at a similar percentage between the Factory, Office and the Selling Department as that of the Heat, Light and Power.	

With the help of the above information, you are required to PREPARE a condensed Profit and Loss Statement of EVS & Co. for the year ended 31st March along with the following schedules:

(i) Cost of Sales (showing Prime Cost, Gross Works Cost, Cost of production, Cost of Goods Sold and Cost of Sales)

(ii) Selling and Distribution Expenses.

(iii) Administration Expenses

Cost Accounting Systems

12. Amy Ltd. uses a batch costing system that is fully integrated with its financial accounts. Balances at the beginning of the period is provided below:

Particulars	(₹)
Stores Ledger Control Account	4,83,250
Work-in-Process Control Account	3,86,600
Finished Goods Control Account	6,76,550

Other information is as under:

Particulars	
Materials purchased during the period	14,49,750
Materials issued to production	5,79,900
Total wages paid (1/6th being indirect)	5,79,900
Direct wages charged to batches	3,86,600
Payment for non-productive time of direct workers	1/5th of direct wages paid
Production Overheads incurred	2,31,960
Sales	19,33,000
Cost of Finished Goods Sold	15,46,400
Cost of Goods completed and transferred into finished goods during the period	12,56,450
Physical value of Work-in-Process at the end of the period	7,73,200
Production overhead absorption rate	130% of direct wages charged to Work-in-Process

You are required to PREPARE the following accounts:

(i) Stores Ledger Control Account.

(ii) Wages Control Account.

(iii) Production Overhead Control Account.

(iv) Work-in-Process Control Account.

(v) Finished Goods Control Account.

(vi) Costing Profit and Loss Account.

Job and Batch Costing

13. X Ltd. provides the following cost details for calculating the selling price of Job No. X2X:

Particulars	Per unit (₹)
Materials	1,330
Direct wages 18 hours @ ₹ 47.50 (Deptt. X: 8 hours; Deptt. Y: 6 hours; Deptt. Z: 4 hours)	855
Chargeable expenses	95
	2,280
Add: 1/3rd for expenses cost	760
	3,040

Analysis of the Profit/Loss Account

(for the current financial year)

			(₹)		(₹)
Materials used			28,50,000	Sales	47,50,000
Direct wages:					
	Deptt. X	1,90,000			
	Deptt. Y	2,28,000			
	Deptt. Z	1,52,000	5,70,000		
Special stores items			76,000		
Overheads:					
	Deptt. X	95,000			
	Deptt. Y	1,71,000			
	Deptt. Z	38,000	3,04,000		
Works cost			38,00,000		
Gross profit c/d			9,50,000		
			47,50,000		47,50,000
Selling expenses			3,80,000	Gross profit b/d	9,50,000

Net profit			5,70,000 9,50,000		9,50,000

It is also noted that average hourly rates for the three Departments X, Y and Z are similar.

You are required to prepare a job cost sheet to DETERMINE the selling price by calculating the entire revised cost using above figures as the base and adding 20% to the total cost.

Process & Operation Costing

14. Following data are available for a product for the month of July, 2024:

Particulars	Process- I (₹)	Process- II (₹)
Opening work-in- progress	Nil	Nil
Costs incurred during the month:		
- Direct materials	6,00,000	
- Labour	1,20,000	1,60,000
- Factory overheads	2,40,000	2,00,000
Units of production:		
Received in process	40,000	36,000
Completed and transferred	36,000	32,000
Closing work-in-progress	2,000	?
Normal loss in process	2,000	1,500

Production remaining in process has to be valued as follows:

Materials 100% Labour 50% Overheads 50%

There has been no abnormal loss in Process- II.

The company follows weighted average method for valuing inventory.

PREPARE Process Accounts after working out the missing figures and with detailed workings.

Joint Products and By products

15. JB Ltd. manufactures three chemical products, XR, YS, and ZT. It processes input material in common plant facility to generate two

intermediate products, X and Y, in 4:1 proportion after a normal loss of 1/12th of the input material. There is no market for these two intermediate products. Thus, X is processed further through separate finishing process R to yield the product XR and Y is converted into product YS by a process S. The S finishing process also produces a waste material, Z, which has no market value. Thus, the company converts Z, after additional processing through process T, into a saleable by-product, ZT.

11,40,000 kg of the common input material are processed each month in common plant facility. And after the separate finishing processes (all losses are normal losses), proportions of XR, YS and ZT emerge as follows:

Product	Quantity (kg)	Market price per kg (₹)
XR	7,60,000	38.80
YS	1,90,000	72.00
ZT	19,000	24.00

The material and processing costs are as follows:

Particulars	Common plant facility (₹)	Separate finishing processes		
		R (₹)	S (₹)	T (₹)
Direct material	97,28,000	33,44,000	4,56,000	30,400
Direct labour	45,60,000	68,40,000	27,36,000	1,67,200
Factory overhead	24,32,000	22,80,000	9,12,000	1,06,400
Total	1,67,20,000	1,24,64,000	41,04,000	3,04,000

You are required to CALCULATE the cost per unit and total operating profit/loss attributed to both the products XR and YS considering all joint costs are allocated based on net realisable value method.

Service Costing

16. Mr. Intell newly sets up a Home Stay in Hanle, Ladakh offering two types of room, single and double. The expected occupancy percentage for the rooms is provided below:

Type of rooms	Number	Occupancy percentage
Single	20	100%
Double	10	80%

The details of the expenses as forecasted are provided below:

Particulars	(₹)
Staff salaries	30,20,000
Food and beverage costs	20,16,000
Lighting and power	8,60,000
Repairs and renovation	4,94,000
Laundry charges	3,22,000
Building rent	14,40,000
Miscellaneous expenses	6,12,000

Room attendants to be paid @ ₹ 125 per room day.

Mr. Intell knowing about the power cut during nights at Hanle to preserve the natural light for astronomical research, sets up emergency power backup, being charged from the customers separately @ ₹ 200 per room, if requested.

The rent of the double room is to be fixed at 1.5 times the single room.

In the month of June, Mr. Matrix along with his family visited Hanle Dark Sky Reserve to experience the breathtaking view of the stars. For one night stay at the place, he approached Mr. Intell to book a double bedroom and also requested for emergency power backup at night.

You are required to CALCULATE the rent to be charged from Mr. Matrix, considering the profit @ 25% on total taking.

(Assume 360 days in a year for calculation purpose.)

Standard Costing

17. COMPUTE the missing data indicated by the question marks from the following:

Particulars	A	B
Standard Price/ unit	₹ 12	₹ 15
Actual Price/ unit	₹ 15	₹ 20
Standard Input (kgs.)	50	?
Actual Input (kgs.)	?	70
Material Price Variance	?	?
Material Usage Variance	?	₹ 300 Adverse
Material Cost Variance	?	?

Material mix variance for both products together was ₹ 45 Adverse.

Marginal Costing

18. Gourmet Food Products is a new entrant in the market for chocolates. It has introduced a new product—Sweetee. This is a small rectangular chocolate bar. The bars are wrapped in aluminium foil and packed in attractive cartons containing 50 bars. A carton, is therefore, considered the basic sales unit. Although management had made detailed estimates of costs and volumes prior to undertaking this venture, new projections based on actual cost experience are now required.

Income Statements for the last two quarters are each thought to be representative of the costs and productive efficiency we can expected in the next few quarter. There were virtually no inventories on hand at the end of each quarter. The income statements reveal the following:–

	First Quarter (₹)	Second Quarter (₹)
Sales :		
50,000 × ₹ 24	12,00,000	—
70,000 × ₹ 24	—	16,80,000
Less: Cost of Goods Sold	7,00,000	8,80,000

Gross Margin	5,00,000	8,00,000
Less: Selling and Administration	6,50,000	6,90,000
Net Income / (Loss) before Taxes	(1,50,000)	1,10,000
Less: Tax	(60,000)	44,000
Net Income / (Loss)	(90,000)	66,000

The firm's overall marginal and average income tax rate is 40%. This 40% figure has been used to estimate the tax liability arising from the chocolate operations.

REQUIRED:

(a) Management would like to know the breakeven point in terms of quarterly carton sales for the chocolates.

(b) Management estimates that there is an investment of ₹ 30,00,000 in this product line. What quarterly carton sales and total revenue are required in each quarter to earn an after tax return of 20% per annum on investment?

(c) The firm's marketing people predict that if the selling price is reduced by ₹ 1.50 per carton (₹ 0.03 off per chocolate bar) and a ₹ 1,50,000 advertising campaign among school children is mounted, sales will increase by 20% over the second quarter sales. Should the plan be implemented?

Budgets and budgetary control

19. The budgets for activity and cost of PQR Ltd. for the first three quarters of operation are shown below:

Period Covered	**Budgets Quarters I – III**		
	Q – I	**Q – II**	**Q – III**
Months	**1 – 3**	**4 – 6**	**7 – 9**
	('000)	**('000)**	**('000)**
Activity :			
Sales (Units)	9	17	15
Production (Units)	10	20	15

Costs (₹) :			
Direct Material			
A	60	120	90
B	50	100	75
Production Labour	180	285	230
Manufacturing Overheads Excluding Depreciation	90	120	105
Depreciation of Production Machinery	20	20	20
Administration Expenses	25	25	25
Selling & Distribution Expenses	38	54	50

The figures shown above represent the costs structure of PQR Ltd., which have the following major features:

(i) Fixed element of any cost is completely independent of activity levels.

(ii) Any variable element of each cost displays a linear relationship with activity level, except that the variable labour cost become 50% higher for activity in excess of 19,000 units per quarter due to the necessity for overtime working.

(iii) The variable element of selling and distribution expenses is a function of sales. All other costs with a variable element are a function of production volume.

Activity for each quarter is spread evenly throughout that quarter.

In Quarter IV Production level will be set equal to sales level. Production and sales in this quarter is expected to range between 15,000 units and 21,000 units. The most likely volume is 18,000 units. In month 9 it will be possible to accurately estimate the sales for Quarter IV.

Cost structure will remain the same as in Quarters I to III except the following:

(i) Labour cost will rise by 12½%.

(ii) Variable labour input per unit of output will decrease, due to learning curve effect, such that 80% of the previous labour input per unit of output will be required in Quarter IV. The threshold for overtime working remains at 19,000 units per quarter.

(iii) Fixed factory overheads and the fixed element of selling and distribution costs will each rise by 20% (The variable element of selling and distribution costs will be unaltered.)

Required

(i) PREPARE a Statement to show, under each cost classification given in the budgets, the variable cost per unit and fixed costs which will be effective in Quarter IV.

(ii) PREPARE a flexible budget of production costs for the Quarter IV.

Miscellaneous

20. (a) DEFINE Product costs. Describe three different purposes for computing product costs.

(b) WHAT do you understand by Operating Costs? DESCRIBE its essential features and state where it can be usefully implemented?

(c) How apportionment of joint costs upto the point of separation amongst the joint products using market value at the point of separation and net realizable value method is done? DISCUSS.

(d) EXPLAIN:

(i) Pre-production Costs

(ii) Research and Development Costs

(iii) Training Costs

SUGGESTED ANSWERS

1. **i.** **(d)** Only avoidable cost is a new managers salary for 2 years

= ₹ 20,00,000 x 2 = ₹ 40,00,000

ii. **(d)** Shut down cost is the cost spent when the company was shut down for 12 years in India

= 12,500 x 12 x 12 + 18,000 x 12 = ₹ 20,16,000

Sunk cost are all the costs that was spent in 2012

= 50,00,000+16,00,000+2,80,000+1,50,000

= ₹ 70,30,000

Total = ₹ 90,46,000

iii. (a) Calculation

Particulars		**Amount (₹)**
Salary	2,50,000 x 12 x 2	60,00,000
Electricity, etc	50,000 x 12 x 2	12,00,000
Security	15,000 x 12months x 2 years	3,60,000
O&A	95,000 x 2 years	1,90,000
Sales	1,12,000 x 2 years	2,24,000
Accounts	88,000 x 2 years	1,76,000
Salary of linde	35,00,000 x 2	70,00,000
Construction	85,00,000 x 2	1,70,00,000
Total		**3,21,50,000**

iv. (b) Cost of new office = ₹ 3,75,00,000

Money received from sale of Noida office

= 2,50,00,000 – (2,50,00,000 – 2,25,00,000) x 12.5%

= ₹ 2,46,87,500

Out of pocket expenses for relocation of head office

= 3,75,00,000 – 2,46,87,500 = ₹ 1,28,12,500

v. (a) Unexpired cost = advance salary paid till march of next year

= (2,50,000+15,000) x 6months + 35,00,000/2 = ₹ 33,40,000

2. i. (b)

Total support cost	**(₹)**
Cartons returned	5,76,000
Delivery	1,20,96,000
Ordering	74,88,000
Shelf stocking	82,94,400
Customer support (₹ 49,15,200 x 3)	1,47,45,600
Total support cost	4,32,00,000
	(₹)
Fancy fans	2,88,00,000
Home decors	7,20,00,000
Assembled furniture	4,32,00,000
Total cost of goods sold (COGS)	14,40,00,000

Percentage of support cost to the cost of goods sold (COGS):

$$= \frac{\text{Total support cost}}{\text{Total cost of goods sold (COGS)}} \times 100$$

$$= \frac{4{,}32{,}00{,}000}{14{,}40{,}00{,}000} \times 100 = 30\%$$

ii. (c)

Particulars	**Fancy Fans (₹)**	**Home decors (₹)**	**Assembled furniture (₹)**
Revenue: (A)	3,80,88,000	10,08,28,800	5,80,75,200
Cost of Goods sold (COGS): (B)	2,88,00,000	7,20,00,000	4,32,00,000
Support cost (30% of COGS): (C) (as calculated in i. above)	86,40,000	2,16,00,000	1,29,60,000
Total cost: (D) = {(B) + (C)}	3,74,40,000	9,36,00,000	5,61,60,000

Operating income: E= {(A)-(D)}	6,48,000	72,28,800	19,15,200
Operating income as a percentage of revenues: (E/A) × 100)	**1.70%**	**7.17%**	**3.30%**

iii. (a)

Activity (1)	Total cost (₹) (2)	Cost allocation base (3)	Cost driver rate (4) = [(2) ÷ (3)]
Delivery	1,20,96,000	6,300 deliveries	₹ 1,920 per delivery
Ordering	74,88,000	3,120 purchase orders	₹ 2,400 per purchase order
Shelf-stocking	82,94,400	17,280 hours of shelf-stocking time	₹ 480 per stocking hour
Customer support	1,47,45,600	1,47,45,600 items sold	Re. 1 per item sold (given)

iv. (d)

	Fancy Fans (₹)	Home decors (₹)	Assembled furniture (₹)
Revenues: (A)	3,80,88,000	10,08,28,800	5,80,75,200
Cost & Goods sold	2,88,00,000	7,20,00,000	4,32,00,000
Carton return costs (Directly attributable to Fancy fans)	5,76,000	0	0
Delivery cost (₹ 1,920 per delivery)	11,52,000 (600 x ₹ 1,920)	84,09,600 (4,380 x ₹ 1,920)	25,34,400 (1,320 x ₹ 1,920)
Ordering cost (₹ 2,400 per purchase order)	17,28,000 (720 x ₹ 2,400)	40,32,000 (1,680 x ₹ 2,400)	17,28,000 (720 x ₹ 2,400)

Shelf stocking cost (₹ 480 per stocking hour)	5,18,400 (1,080 x ₹ 480)	51,84,000 (10,800 x ₹ 480)	25,92,000 (5,400 x ₹ 480)
Customer Support cost (₹ 1 per item sold)	12,09,600 (12,09,600 x ₹ 1)	1,05,98,400 (1,05,98,400 x ₹ 1)	29,37,600 (29,37,600 x ₹ 1)
Total Cost: (B)	3,39,84,000	10,02,24,000	5,29,92,000
Operating income: (C) = (A) - (B)	**41,04,000**	**6,04,800**	**50,83,200**

v. (b)

	Fancy Fans (₹)	**Home decors (₹)**	**Assembled furniture (₹)**
Operating income (from iv. Above) (A)	41,04,000	6,04,800	50,83,200
Revenues (B)	3,80,88,000	10,08,28,800	5,80,75,200
Operating income as a percentage of revenues: (A/B) × 100)	**10.78%**	**0.60%**	**8.75%**

3. (c) Calculation of total earnings:

As per Halsey 50% plan

= Time taken × Time rate + (50% of Time saved × Time rate)

= 5 hrs. × ₹ 100 + [1/2 × (5 hrs. × ₹ 100)]

= ₹ 500 + ₹ 250 **= ₹ 750**

As per Rowan Premium plan

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

$$= 5 \text{ hours} \times ₹\ 100 + \left[\left(\frac{5 \text{ Hours}}{10 \text{ Hours}}\right) \times 5 \text{ hours} \times ₹\ 100\right]$$

= ₹ 500 + ₹ 250 **= ₹ 750**

When the actual time taken is 50% of the time allowed, the earnings under Halsey and Rowan Plans are equal.

4. (d) Work-in-Process Control A/c Dr. xxx

To Store Ledger Control A/c xxx

5. (a)

Dr.			Process-II Account				Cr.
	Particulars	**Units**	**Total (₹)**		**Particulars**	**Units**	**Total (₹)**
To	Process-I A/c	48,750	27,85,700	By	Normal Loss A/c (5% of 48,750 units)	2,438	--
"	Material	--	10,00,000	"	Output (₹ 96.858 × 47,000 units)	47,000	45,52,326
"	Labour	--	2,00,000				
"	Manufacturing OH	--	5,00,000				
"	Abnormal Gain A/c (₹ 96.858 × 688 units)	688	**66,626** (round off)				
		49,438	45,52,326			49,438	45,52,326

Cost per unit of completed units and abnormal gain:

$$= \left(\frac{\text{Total Cost}}{\text{Input units - Normal Loss}}\right)$$

$$= \left(\frac{₹\ 44,85,700}{48,750\text{ units} - 2,438\text{ units}}\right)$$

= ₹ 96.858

6. (c) **Process- I Account**

Particulars	**Units**	**(₹)**	**Particulars**	**Units**	**(₹)**
To Raw material	75,000	4,76,250	By Normal loss (W.N. (ii))	**1,500**	**18,750**

To Direct labour		2,25,000	By Output (W.N. (iii))		
To Direct expenses		67,500	P1 (W.N. (iv))	**44,850**	**6,08,678**
To Production overheads (W.N.(i))		2,47,500	P2 (W.N. (iv))	**29,900**	**4,05,786**
To Abnormal gain (W.N. (iv))	**1,250**	**16,964**			
	76,250	10,33,214		76,250	10,33,214

Working Note Working Notes (W.N.):

(i) Production overheads = 110% x 2,25,000

= ₹ 2,47,500

(ii) Normal loss = 2% x 75,000 = 1,500 kg at ₹ 12.5

= ₹ 18,750

(iii) Total output = 75,000 input + 1,250 abnormal gain - 1,500 normal loss

= 74,750 kg

P1 and P2 is produced in the ratio 6:4

P1 = $\left(\frac{6}{10}\right)$ x 74,750 = 44,850 kg

P2 = $\left(\frac{4}{10}\right)$ x 74,750 = 29,900 kg

(iv) Value of Abnormal Gain:

$$= \left(\frac{\text{Total Cost - Realisable value of normal loss}}{\text{Total input units - Normal Loss units}} \text{ x Abnormal Gain units}\right)$$

$$= \left(\frac{₹\ 4,76,250 + ₹\ 2,25,000 + ₹\ 67,500 + ₹\ 2,47,500 - ₹\ 18,750}{75,000 - 1,500 \text{ units}} \text{ x 1,250 units}\right)$$

= ₹ 16,964

Value of Joint Products:

$$= \left(\frac{\text{Total Cost - Realisable value of normal loss}}{\text{Total input units - Normal Loss units}} \text{ x Output units}\right)$$

$$\text{P1} = \left(\frac{₹\ 4,76,250 + ₹\ 2,25,000 + ₹\ 67,500 + ₹\ 2,47,500 - ₹\ 18,750}{75,000 - 1,500 \text{ units}} \text{ x 44,850 units}\right)$$

$= ₹\ 6{,}08{,}679$

$$P2 = \left(\frac{₹\ 4{,}76{,}250 + ₹\ 2{,}25{,}000 + ₹\ 67{,}500 + ₹\ 2{,}47{,}500 - ₹\ 18{,}750}{75{,}000 - 1{,}500 \text{ units}} \times 29{,}900 \text{ units}\right)$$

$= ₹\ 4{,}05{,}786$

7. **(c)** PR Ltd. is expecting to sell 6,000 units of ball pen along with 3,600 units of gel pen, resulting in a sales mix of 5:3 per batch.

Thus, composite contribution per batch = (₹ 60 x 5 ball pens) + (₹ 40 x 3 gel pens)

= ₹ 420

$$\text{Composite Break-even Batch} = \left(\frac{\text{Commom fixed costs}}{\text{Composite contribution per batch}}\right)$$

$$= \left(\frac{₹\ 3{,}36{,}000}{₹\ 420}\right)$$

= 800 batches

Break-even units of Ball pen = 800 x 5 = 4,000 units

Break-even units of Gel pen = 800 x 3 = 2,400 units

8. **(i)** **Economic order quantity (EOQ) as calculated by the company's managing director**

$$\textbf{EOQ} = \sqrt{\frac{2AO}{C}}$$

where A = annual inventory requirement,

O = ordering cost per order and

C = carrying cost per unit per annum

$$= \sqrt{\frac{2 \text{x} 2{,}50{,}000 \text{ drums x } ₹\ 100}{[₹\ 180 + (10\% \text{ of } ₹\ 200)]}}$$

= 500 units

(ii) Comparison of total cost considering purchasing manager's bonus and supplier quantity discounts

Particulars		**At EOQ of 500 units (₹)**	**If considered quantity discount at 1000 units (₹)**
Ordering Cost	[(2,50,000 units/500 units) × ₹ 100]	50,000	
	[(2,50,000 units/1000 units) × ₹ 100]		25,000
Carrying Cost	{500 units/ 2 x [(₹ 180 + (10% of ₹ 200)]}	50,000	
	{1,000 units/ 2 x [(₹ 180 + (10% of ₹ 199.60)]}		99,980
		1,00,000	1,24,980
Purchasing manager's bonus	10% of (₹ 2,00,000 - ₹ 1,00,000)	10,000	
	10% of (₹ 2,00,000 - ₹ 1,24,980)		7,502
Annual inventory cost	2,50,000 units x ₹ 200	5,00,00,000	
	2,50,000 units x ₹ 199.60		4,99,00,000
Total Cost		**5,01,10,000**	**5,00,32,482**

In above comparison, the potential savings from purchasing in bulk outweigh the higher carrying costs associated with holding more inventory. Thus, Catalist Ltd. may look forward to the quantity discount offered at 1,000 units.

9. Statement showing Earnings of Workers Pi and Qu

	Pi (₹)	**Qu (₹)**
Basic wages	12,000	15,000
Dearness Allowance (50% of Basic Wages)	6,000	7,500
Overtime wages (Refer to Working Note)	1,371	--
Gross wages earned	19,371	22,500

Less: Contribution to Provident fund	(1,200)	(1,500)
Less: Contribution to ESI	(210)	(263)
Net wages earned	**17,961**	**20,737**

Statement of Employee Cost:

	Pi (₹)	Qu (₹)
Gross Wages (excluding overtime)	18,000	22,500
Add: Employer's contribution to PF	1,200	1,500
Add: Employer's contribution to ESI	210	263
Gross wages earned	19,410	24,263

Statement Showing Allocation of Wages to Jobs

	Total Wages (₹)	Jobs		
		A (₹)	S (₹)	D (₹)
Worker Pi:				
- Ordinary Wages (3: 3 : 4)	19,410	5,823	5,823	7,764
- Overtime	1,371	--	1,371	--
Worker Qu:				
- Ordinary Wages (3 : 5 : 2)	24,263	7,279	12,131	4,853
	45,044	13,102	19,325	12,617

Working Note:

$$\text{Over time} = 2 \times \left(\frac{\text{Basic wage + DA}}{\text{210 hours}}\right) \text{X 8 hours}$$

$$= 2 \times \left(\frac{₹\ 18{,}000}{\text{210 hours}}\right) \text{X 8 hours}$$

$$= ₹\ 1{,}371$$

10. (i) Computation of predetermined overhead rate for each production departments from budgeted data

	Production Department		Service Department	
	P_1	**P_2**	**S_1**	**S_2**
Budgeted factory overheads for the year (₹)	2,80,50,000	2,39,25,000	66,00,000	49,50,000
Allocation of service department S_1's costs to production departments P_1 and P_2 equally (₹)	33,00,000	33,00,000	(66,00,000)	—
Allocation of service department S_2's costs to production departments P_1 and P_2 in the ratio of 2:1 (₹)	33,00,000	16,50,000	—	(49,50,000)
Total	3,46,50,000	2,88,75,000	—	—
Budgeted machine hours in department P_1 (working note 1)	2,10,000	—		
Budgeted labour hours in department P_2 (working note 1)	—	3,50,000		
Budgeted machine/ labour hour rate (₹)	165	82.50		

(ii) Comparative statement reflecting Budgeted cost and Actual cost for production of the Products X and Y during the month of December, 2024

(When 8,000 and 6,000 units of products X and Y respectively were actually produced)

	Budgeted (₹)	**Actual (₹)**
Raw materials used in Dept. P_1:		
X : 8,000 units × ₹ 660	52,80,000	53,79,000

Y : 6,000 units × ₹ 825	49,50,000	50,16,000
Direct labour cost (on the basis of labour hours worked in department P_2)		
X : 8,000 units × 2 hrs. × ₹ 396	63,36,000	65,10,900
Y : 6,000 units × 2.5 hrs. × ₹ 412.50	61,87,500	60,72,000
Overhead absorbed on machine hour basis in Dept. P_1:		
X : 8,000 units × 1.5 hrs. × ₹ 165	19,80,000	19,18,084*
Y : 6,000 units × 1 hr. × ₹ 165	9,90,000	13,04,926*
Overhead absorbed on labour hour basis in Dept. P_2:		
X : 8,000 units × 2 hrs. × ₹ 82.50	13,20,000	14,45,496**
Y : 6,000 units × 2.5 hrs. × ₹ 82.50	12,37,500	13,04,472**

* (Refer to working note 4)

**(Refer to working note 5)

(iii) Amount of under/ over-absorption of production overheads

	Overhead absorbed	Overhead actually incurred	Overhead under/ over-absorbed
Overhead in Dept. P_1			
Product X	19,80,000	19,18,084	**₹ 61,916 over-absorbed**
Product Y	9,90,000	13,04,926	**₹ 3,14,926 under-absorbed**
Overhead in Dept. P_2			
Product X	13,20,000	14,45,496	**₹ 1,25,496 under-absorbed**
Product Y	12,37,500	13,04,472	**₹ 66,972 under-absorbed**

Working notes:

1.

	Product X	Product Y	Total
Budgeted output (in units)	1,00,000	60,000	
Budgeted machine hours in Dept. P_1	1,50,000 (1,00,000×1.5 hrs.)	60,000 (60,000×1 hr.)	2,10,000
Budgeted labour hours in Dept. P_2	2,00,000 (1,00,000×2 hrs.)	1,50,000 (60,000×2.5 hrs.)	3,50,000

2.

	Product X	Product Y	Total
Actual output (in units)	8,000	6,000	
Actual machine hours utilized in Dept. P_1	12,200	8,300	20,500
Actual labour hours utilised in Dept. P_2	16,400	14,800	31,200

3. Computation of actual overhead rates

	Production Department		Service Department	
	P_1	P_2	S_1	S_2
Actual factory overheads for the month of December, 2024 (₹)	25,41,000	22,44,000	6,60,000	5,28,000
Allocation of service Dept. S_1's costs to production Dept. P_1 and P_2 equally (₹)	3,30,000	3,30,000	(6,60,000)	–
Allocation of service Dept. S_2's costs to production Dept. P_1 and P_2 in the ratio of 2:1 (₹)	3,52,000	1,76,000	–	(5,28,000)
Total	32,23,000	27,50,000	--	--
Actual machine hours in Dept. P_1 (working note 2)	20,500	--		
Actual labour hours in Dept. P_2 (working note 2)	--	31,200		
Actual machine/ labour hour rate (₹)	157.22	88.14		

4. Actual overheads absorbed in Department P_1 (based on machine hours)

X : 12,200 hrs × ₹ 157.22 = ₹ 19,18,084

Y : 8,300 hrs × ₹ 157.22 = ₹ 13,04,926

5. Actual overheads absorbed in Department P_2 (based on labour hours)

X : 16,400 hrs × ₹ 88.14 = ₹ 14,45,496

Y : 14,800 hrs × ₹ 88.14 = ₹ 13,04,472

11. Profit and Loss Statement of EVS & Co. for the year ended 31st March

Particulars	(₹)	(₹)
Gross Sales	1,35,21,600	
Less: Returns and rebates	(1,91,800)	1,33,29,800
Less: Cost of Sales [See Schedule (i)]		(**1,20,21,887**)
Net Operating Profit		13,07,913
Less: Cash discount allowed on sales		(1,17,820)
Net Profit		**11,90,093**

(i) Schedule of Cost of Sales

Particulars	(₹)	(₹)
Raw Material (Inventory opening balance)		19,18,000
Add: Material Purchased	43,84,000	
Add: Freight on Material	2,19,200	
Less: Purchase Returns	(65,760)	45,37,440
		64,55,440
Less: Closing Raw Material Inventory		(24,66,000)
Materials consumed in Production		39,89,440
Direct employee cost (₹ 21,92,000 + ₹ 1,09,600)		23,01,600

Prime Cost		**62,91,040**
Factory Overheads:		
Indirect employee cost	2,46,600	
Drawing and Designing cost	1,37,000	
Repairs and maintenance of factory	1,91,800	
Heat, Light and Power (₹ 8,90,500 × 70%)	6,23,350	
Pollution Control Expenses	2,56,190	
Depreciation of Plant (40% of ₹ 63,08,850)	25,23,540	
Depreciation of Building (10% of ₹ 27,40,000 × 70%)	1,91,800	41,70,280
Gross Works Cost		**1,04,61,320**
Add: Opening Work-in-Process inventory		27,40,000
Less: Closing Work-in-Process inventory		(26,30,400)
Cost of production		**1,05,70,920**
Add: Opening Finished Goods inventory		10,96,000
Less: Closing Finished Goods inventory		(15,75,500)
Cost of Goods Sold		**1,00,91,420**
Add: Administration Expenses [See Schedule (iii)]		4,25,522
Add: Selling and Distribution Expenses [See Schedule (ii)]		15,04,945
Cost of Sales		**1,20,21,887**

Note: Cash discount allowed on sales will not form part of Cost Sheet.

(ii) Schedule of Selling and Distribution Expenses

Particulars	(₹)
Sales Commission	4,60,320
Sales Promotion	3,08,250
Distribution Deptt. - Salaries and Expenses	2,46,600
Heat, Light and Power (₹ 8,90,500 x 15%)	1,33,575
Depreciation of Building (10% of ₹ 27,40,000 × 15%)	41,100
Packing Cost to make the product marketable	3,15,100
	15,04,945

(iii) Schedule of Administration Expenses

Particulars	(₹)
Office Salaries and Expenses	1,17,820
Depreciation of Office Appliances (₹ 2,38,380 x 15%)	35,757
Depreciation of Building (10% of ₹ 27,40,000 × 15%)	41,100
Heat, Light and Power (₹ 8,90,500 x 15%)	1,33,575
Printing and Stationery expenses	89,050
Bank Charges paid	8,220
	4,25,522

12. (i) Stores Ledger Control Account

		(₹)			(₹)
To	Balance b/d	4,83,250	By	Work in Process Control A/c	5,79,900
"	Creditors/ Bank A/c	14,49,750	"	Balance c/d	13,53,100
		19,33,000			19,33,000

(ii) Wages Control Account

		(₹)			(₹)
To	Bank A/c	5,79,900	By	Work in Process Control A/c (Charged to batches)	3,86,600
			,,	Production Oh Control A/c (Indirect wages) (1/6th of ₹ 5,79,900)	96,650
			"	Production Oh Control A/c (Non-productive wages) [1/5th of (₹ 5,79,900 -₹ 96,650)]	96,650
		5,79,900			5,79,900

(iii) Production Overhead Control Account

		(₹)			(₹)
To	Bank A/c	2,31,960	By	Work-in-Process Control A/c (130% of ₹ 3,86,600)	5,02,580
"	Wages Control A/c (₹ 96,650 +₹ 96,650)	1,93,300			
"	Costing P&L A/c (Over-absorption, balancing figure)	77,320			
		5,02,580			5,02,580

(iv) Work-in-Process Control Account

		(₹)			(₹)
To	Balance b/d	3,86,600	By	Finished Goods Control A/c	12,56,450
"	Store Ledger Control A/c	5,79,900	"	Balance c/d (Physical value)	7,73,200
"	Wages Control A/c	3,86,600			
"	Production OH Control A/c	5,02,580			
"	Costing P&L A/c (Stock Gains)	1,73,970			
		20,29,650			20,29,650

(v) Finished Goods Control Account

		(₹)			(₹)
To	Balance b/d	6,76,550	By	Costing Profit & Loss A/c (Cost of Goods Sold)	15,46,400
"	Work-in-Process Control A/c	12,56,450	"	Balance c/d	3,86,600
		19,33,000			19,33,000

(vi) Costing Profit & Loss Account

		(₹)			(₹)
To	Finished Goods Control A/c	15,46,400	By	Sales A/c	19,33,000
"	Balance c/d	6,37,890	"	Production OH Control A/c	77,320
			"	Work-in-Process Control A/c (Stock gain)	1,73,970
		21,84,290			21,84,290

13. Job cost Sheet

Particulars	**Amount (₹)**
Direct materials	1,330.00
Direct wages:	
Deptt. X ₹ 47.50 × 8 hrs. = ₹ 380	
Deptt. Y ₹ 47.50 × 6 hrs. = ₹ 285	
Deptt. Z ₹ 47.50 × 4 hrs. = ₹ 190	855.00
Chargeable expenses	95.00
Prime cost	**2,280.00**
Overheads:	
Deptt. X $= \left(\frac{₹\ 95,000}{₹\ 1,90,000} \times 100\right)$ = 50% of ₹ 380 = ₹ 190.00	

Deptt. Y $= \left(\frac{₹\ 1,71,000}{₹\ 2,28,000} \times 100\right)$ = 75% of ₹ 285 = ₹ 213.75		
Deptt. Z $= \left(\frac{₹\ 38,000}{₹\ 1,52,000} \times 100\right)$ = 25% of ₹ 190 = ₹ 47.50		451.25
Works cost		**2,731.25**
Selling expenses= $\left(\frac{₹\ 3,80,000}{₹\ 38,00,000} \times 100\right)$ = 10% of work cost		**273.13**
Total cost		3,004.38
Profit (20% of total cost)		600.88
Selling price		**3,605.26**

14. Statement of Equivalent Units (Process- I)

Input (Units)	Particulars	Output (Units)	Equivalent Production			
			Materials		Labour and Overheads	
			Units	(%)	Units	(%)
40,000	Introduced and completed	36,000	36,000	100	36,000	100
	Normal loss	2,000	-	-	-	-
	Closing stock	2,000	2,000	100	1,000	50
40,000		40,000	38,000		37,000	

Computation of cost per Equivalent Unit for each element of cost (Process- I)

Elements of Cost	Total Cost (₹)	Equivalent units	Cost per Equivalent units (₹)
Direct Materials	6,00,000	38,000	15.7895
Labour	1,20,000	37,000	3.2432
Factory Overheads	2,40,000	37,000	6.4865

Statement of Apportionment of Cost

Items	Elements	Equivalent units	Cost per unit (₹)	Cost (₹)	Total (₹)
Units introduced and completed	Materials	36,000	15.7895	5,68,422.00	
	Labour	36,000	3.2432	1,16,755.20	
	Overheads	36,000	6.4865	2,33,514.00	9,18,691.20
Closing stock	Materials	2,000	15.7895	31,579.00	
	Labour	1,000	3.2432	3,243.20	
	Overheads	1,000	6.4865	6,486.50	41,308.70

Process- I Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Materials	40,000	6,00,000	By Normal loss	2,000	-
To Labour		1,20,000	By Process II	36,000	9,18,691
To Overheads		2,40,000	By Closing stock	2,000	41,309
	40,000	9,60,000		40,000	9,60,000

Statement of Equivalent Units (Process- II)

Input (Units)	Particulars	Output (Units)	Equivalent Production			
			Materials		Labour and Overheads	
			Units	(%)	Units	(%)
36,000	Units transferred from Process- I					
	Normal loss	1,500	-	-	-	-
	Completed	32,000	32,000	100	32,000	100
	Closing stock (balancing figure)	2,500	2,500	100	1,250	50
36,000		36,000	34,500		33,250	

Computation of cost per Equivalent Unit for each element of cost (Process- I)

Elements of Cost	Total Cost (₹)	Equivalent units	Cost per Equivalent units (₹)
Cost of 36,000 units transferred from Process- I	9,18,691	34,500	26.6287
Labour	1,60,000	33,250	4.8120
Factory Overheads	2,00,000	33,250	6.0150

Statement of Apportionment of Cost

Items	Elements	Equivalent units	Cost per unit (₹)	Cost (₹)	Total (₹)
Units introduced and completed	Materials	32,000	26.6287	8,52,118.40	
	Labour	32,000	4.8120	1,53,984.00	
	Overheads	32,000	6.0150	1,92,480.00	11,98,582.40
Closing stock	Materials	2,500	26.6287	66,571.75	
	Labour	1,250	4.8120	6,015.00	
	Overheads	1,250	6.0150	7,518.75	80,105.50

Process- II Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Units introduced	36,000	9,18,691	By Normal loss	1,500	-
To Labour		1,60,000	By Finished stock	32,000	11,98,582
To Overheads		2,00,000	By Closing stock	2,500	80,109*
	36,000	12,78,691		36,000	12,78,691

*Difference arose due to rounding-off has been adjusted.

15. Statement showing operating profit/loss by each product after further processing

	Product XR (7,60,000 kg)		Product YS (1,90,000 kg)	
	Total (₹)	**Cost per unit (₹)**	**Total (₹)**	**Cost per unit (₹)**
Joint costs (W.N.)	1,06,40,000	14.0	60,80,000	32.0
Further processing costs	1,24,64,000	16.40	41,04,000	21.60
By-product net revenues			(1,52,000)	(0.80)
Total cost	2,31,04,000	**30.40**	1,00,32,000	**52.80**
Sales	2,94,88,000	38.80	1,36,80,000	72.00
Operating profit	**63,84,000**	8.40	**36,48,000**	19.20

Working Note:

Calculation of joint costs using Net realisable value method:

Particulars	**Product XR (₹)**	**Product YS (₹)**
Sales Value	2,94,88,000 (₹ 38.80 × 7,60,000 kg)	1,36,80,000 (₹ 72.00 × 1,90,000 kg)
Add: By-product net revenue	-	1,52,000 [(₹ 24.00 x 19,000 kg) - ₹ 3,04,000]
Less: Post split-off cost (Further processing cost)	(1,24,64,000)	(41,04,000)
Net Realisable Value	1,70,24,000	97,28,000
Apportionment of Joint Cost of ₹ 1,67,20,000 in ratio of 1,70,24:97,28	**1,06,40,000**	**60,80,000**

16. Working Notes:

Total equivalent single rooms

Nature of room	Occupancy (Room-days)	Equivalent single rooms (Room-days)
Single room	7,200 (20 rooms × 360 days × 100%)	7,200 (7,200 × 1)
Double rooms	2,880 (10 rooms × 360 days × 80%)	4,320 (2,880 × 1.5)
	10,080	11,520

Statement of total cost

Particulars	(₹)
Staff salaries	30,20,000
Room attendant's wages (₹ 125 per Room Day for 10,080 Room Days)	12,60,000
Food and beverage costs	20,16,000
Lighting and power	8,60,000
Repairs and renovation	4,94,000
Laundry charges	3,22,000
Building rent	14,40,000
Miscellaneous expenses	6,12,000
Total cost	**1,00,24,000**

Profit is 25% on total taking

∴ Total taking = ₹ 1,00,24,000 + 25% of total taking

Let R be rent for single room

Then 11,520 R = 1,00,24,000 + (0.25 × 11,520 R)

Or, 8,640 R = 1,00,24,000

Or, R = ₹ 1,160 (approx.)

Rent to be charged for single room = ₹ 1,160

Rent for double room ₹ 1,160 × 1.5 = ₹ 1,740

Rent to be charged from Mr. Matrix

Double room rent	₹ 1,740
Add: Power backup charges	₹ 200
	₹ 1,940

17. **(i)** Standard input (kgs.) of Material- B:

Material usage variance = Std. Rate (Std. Quantity – Actual Quantity)

₹ 300 Adverse = ₹ 15 (SQ – 70)

Or, -300 = 15 SQ – 1,050

Or, SQ = 50 kgs.

(ii) Actual Input (kgs) of Material- A:

Let the actual input in for Material-A is X kgs.

Material Mix Variance = Std. Price (Actual Quantity in Std. mix – Actual Quantity)

Or, Material Mix Variance (A+B) = Material Mix Variance for Material - A + Material Mix Variance for Material -B

Or, $-45 = [₹12\{(\frac{X+70}{2}) - X\}] + [₹15\{(\frac{X+70}{2}) - 70\}]$

Or, $-45 = [₹12\{\frac{X+70-2X}{2}\}] + [₹15\{\frac{X+70-140}{2}\}]$

Or, $-45 = [₹12\{\frac{70-X}{2}\}] + [₹15\{\frac{X-70}{2}\}]$

Or, $-45 = [-6X + 420] + [\frac{15X - 1{,}050}{2}]$

Or, $-45 = [\frac{-12X + 840 + 15X - 1{,}050}{2}]$

Or, $-90 = 3X - 210$

Or, X = $\frac{120}{3} = 40\text{kgs.}$

(iii) (a) Material Price Variance of A = Actual Quantity (Std. Rate – Actual Rate)

= 40 kg. (12–15) = ₹ 120 Adverse

(b) Material Price Variance of B = 70 kg. (15 – 20) = ₹ 350 Adverse

(iv) Material usage variance of A = Std. Rate (Std. Quantity – Actual Quantity)

= 12 (50 – 40) = ₹ 120 Favourable

(v) (a) Material Cost variance of A = Std. Cost – Actual Cost

= (50 kgs. @ ₹ 12) – (40 kgs. @ ₹ 15)

= 600 – 600 = Nil

(b) Material Cost variance of B = (50 kgs. @ ₹ 15) – (70 kgs. @ ₹ 20)

= 750 – 1,400 = ₹ 650 Adverse

18. **(a)** Estimation of the Fixed and Variable Costs.

Variable Manufacturing Cost per carton:

$$= \frac{\text{Change in Costs}}{\text{Change in Activity}}$$

$$= \frac{₹8,80,000 - ₹7,00,000}{70,000 - 50,000}$$

$$= \frac{₹1,80,000}{20,000}$$

= ₹ 9 per carton

Fixed Manufacturing Costs:

Costs of Goods Sold = Fixed Manufacturing Cost + Variable Manufacturing Cost

₹ 7,00,000 = Fixed Manufacturing Cost + (50,000 Cartons × ₹9)

Fixed Manufacturing Cost = ₹7,00,000 – ₹4,50,000

= ₹2,50,000

Variable Selling and Administration Cost per unit:

$$= \frac{₹6,90,000 - ₹6,50,000}{70,000 - 50,000}$$

$$= \frac{₹40,000}{20,000}$$

= ₹ 2 *per unit*

Fixed Selling & Administration Costs:

Total Selling & Admn. Costs = Fixed Selling & Admn. Cost + Variable Selling & Admn. Costs

₹6,50,000 = Fixed Selling & Admn. Costs + (50,000 Cartons × ₹ 2)

Fixed Selling & Admn. Cost = ₹6,50,000 – ₹1,00,000

= ₹5,50,000

So the Total Variable Costs *per unit* are ₹ 11 *per unit* (₹ 9 + ₹ 2).

Total Fixed Costs are ₹8,00,000 *per quarter* (₹ 2,50,000 + ₹ 5,50,000).

Given Sale Price of ₹24 *per carton* and Variable Costs of ₹ 11 *per carton*, the Contribution *per carton* is ₹ 13 (₹ 24 – ₹ 11).

Breakeven Point (in terms of carton units)

$$= \frac{\text{Fixed cost (per quarter)}}{\text{Contribution per Carton}}$$

$$= \frac{₹8,00,000}{₹13}$$

= 61,539 Cartons

(b) To earn an After Tax Return of 20% on ₹30,00,000, the Desired Annual After Tax Net Income is ₹6,00,000 (₹30,00,000 × 20%). The Quarterly After Tax Net Income will be ₹1,50,000. Given the Tax

Rate of 40%, the Pre-tax Return will be ₹ 2,50,000 (₹ 1,50,000 × 100/60).

Quarterly Sales (units) = $\frac{\text{Fixed Cost + Desired Return}}{\text{Contribution per unit}}$

= $\frac{₹(8,00,000+2,50,000)}{₹13}$

= $\frac{₹10,50,000}{₹13}$

= 80,769 Cartons

Quarterly Sales Revenue = ₹19,38,456 (80,769 Cartons × ₹ 24)

(c) The proposal involves reducing Selling Price from ₹24 *per carton* to ₹ 22.50 *per carton*. Hence the Contribution *per carton* will be ₹ 11.50 (₹22.50 – ₹11.00).

The increase in Advertising Costs will push Fixed Costs up by ₹1,50,000 to ₹9,50,000.

A 20% increase over second quarter's Sales would increase Sales form 70,000 cartons to 84,000 cartons.

The Expected Earnings Before Taxes will be ₹ 16,000 [(84,000 Cartons × ₹ 11.50) – ₹ 9,50,000].

After deducting Tax at 40%, the Net Income will be ₹9,600 (₹ 16,000 – ₹ 6,400).

Earning has reduced from ₹ 66,000 to ₹ 9,600, accordingly this plan should not be implemented.

19. (i) Statement of Variable Cost *per unit* and Fixed Costs under Given Cost Classification Effective for Quarter IV

Particulars	Total Fixed Cost (₹)	Variable Cost p.u. (₹)
Direct Materials (W.N.1)		
A	-----	6
B	-----	5

Production Labour (W.N.2)	90,000	9
Manufacturing Overhead Ex. Depreciation (W.N.3)	72,000	3
Depreciation of Production Machinery	20,000	-----
Administration Expenses	25,000	-----
Selling & Distribution Expenses (W.N.4)	24,000	2

(ii) Flexible Budget of Production Costs for the Quarter IV

Particulars	**15,000 units (₹)**	**18,000 units (₹)**	**21,000 units (₹)**
Direct Material			
A	90,000 (15,000 units × ₹ 6)	1,08,000 (18,000 units × ₹ 6)	1,26,000 (21,000 × ₹ 6)
B	75,000 (15,000 units × ₹ 5)	90,000 (18,000 × ₹ 5)	1,05,000 (21,000 units × ₹ 5)
Production Labour	2,25,000 (15,000 units × ₹ 9 + ₹ 90,000)	2,52,000 (18,000 units × ₹ 9 + ₹ 90,000	2,88,000*
Manufacturing	1,17,000	1,26,000	1,35,000
Overhead	(15,000 units × ₹ 3	(18,000 units × ₹ 3	(21,000 units × ₹ 3
	+ ₹ 72,000)	₹ 72,000)	+ ₹ 72,000)
Depreciation	20,000	20,000	20,000
Total Production Cost	5,27,000	5,96,000	6,74,000

* Production Labour (21,000 units level)

	₹
Variable Cost (21,000 units × ₹ 9)	1,89,000

Fixed Cost	90,000
Overtime (2,000 units × ₹ 9 × 0.50)	9,000
	2,88,000

Working Notes

1. Direct Material Cost:

$$A: \frac{₹\ 60{,}000}{10{,}000 \text{ units}} = ₹\ 6$$

$$B: \frac{₹\ 50{,}000}{10{,}000 \text{ units}} = ₹\ 5$$

Direct material cost (variable cost) for material A and B for all the quarters on computation comes to ₹ 6 /- and ₹ 5 /- for materials A and B respectively.

2. Fixed and Variable Cost Component of *production labour cost:*

Particulars	Quarter I	Quarter III	Change
Production (units)	10,000	15,000	5,000
Production labour (₹)	1,80,000	2,30,000	50,000

Variable Cost (per unit) $= \frac{\text{Change in Production Labour Cost}}{\text{Change in Production Units}}$

Change in Production units $= \frac{₹\ 16{,}000}{8{,}000}$

$= \frac{₹\ 50{,}000}{5{,}000}$

$=$ ₹ 10

Fixed Cost = ₹ 1,80,000 – ₹ 1,00,000

= ₹ 80,000

For Quarter II (20,000 units):

	₹
Variable Cost of 20,000 units @ ₹ 10 p.u.	2,00,000

Fixed Cost	80,000
Overtime Premium on 1,000 @ ₹ 5 p.u.	5,000
Total Production Labour Cost	2,85,000

For Quarter IV (18,000 units):

	₹
Variable Cost of 18,000 units @ ₹ 9 p.u.	1,62,000
(₹ 10 × 1.125 × 0.80 = ₹ 9)	
Fixed Cost (₹ 80,000 × 1.125)	90,000
Total Production Labour Cost	2,52,000

3. Fixed and Variable Cost Component of *manufacturing overhead:*

	Quarter I	Quarter II	Change
Production (units)	10,000	20,000	10,000
Manufacturing Overhead (₹) (Excluding Depreciation)	90,000	1,20,000	30,000

Variable Cost Component of *manufacturing overhead:*

$$= \frac{\text{Change in Manufacturing Overhead Costs}}{\text{Change in Production Units}}$$

$$= \frac{₹\ 30{,}000}{10{,}000 \text{ units}}$$

= ₹ 3 p.u

Fixed Cost Component of *manufacturing overhead:*

= ₹ 1,20,000 – 20,000 units × ₹ 3

= ₹ 60,000

For Quarter IV:

		₹
Fixed Cost	=	60,000
Add: 20% Increase	=	12,000

Total Fixed Cost = 72,000

4. Fixed and Variable Cost Component of *selling and distribution expenses*

	Quarter I	Quarter II	Change
Sales (units)	9,000	17,000	8,000
Selling & Distribution Expenses	38,000	54,000	16,000

Variable Cost Component of *selling & distribution expenses:*

$$= \frac{\text{Change in selling \& Distribution expenses}}{\text{Change in sales units}}$$

$$= \frac{₹\,16{,}000}{8{,}000}$$

= ₹ 2 per unit

Fixed Cost Component of *selling & distribution expenses:*

= ₹ 54,000 – 17,000 units × ₹ 2

= ₹ 20,000

Fixed Cost Component for IV Quarter:

= ₹ 20,000 × 1.20

= ₹ 24,000

20. (a) Definition of product costs: Product costs are inventoriable costs. These are the costs, which are assigned to the product. Under marginal costing variable manufacturing costs and under absorption costing, total manufacturing costs constitute product costs.

Purposes for computing product costs:

The three different purposes for computing product costs are as follows:

(i) *Preparation of financial statements:* Here focus is on inventoriable costs.

(ii) *Product pricing:* It is an important purpose for which product costs are used. For this purpose, the cost of the areas along with the value chain should be included to make the product available to the customer.

(iii) *Contracting with government agencies:* For this purpose government agencies may not allow the contractors to recover research and development and marketing costs under cost plus contracts.

(b) Operating Costs or Service Costing are the costs incurred by undertakings which do not manufacture any product but provide a service. Such undertakings for example are — Transport concerns, Gas agencies; Electricity Undertakings; Hospitals; Theatres etc. Because of the varied nature of activities carried out by the service undertakings, the cost system used is obviously different from that followed in manufacturing concerns.

The essential features of operating costs are as follows:

(1) The operating costs can be classified under three categories. For example in the case of transport undertaking these three categories are as follows:

(a) Operating and running charges: It includes expenses of variable nature. For example expenses on petrol, diesel, lubricating oil, and grease etc.

(b) Maintenance charges: These expenses are of semi-variable nature and includes the cost of tyres and tubes, repairs and maintenance, spares and accessories, overhaul, etc.

(c) Fixed or standing charges: These includes garage rent, insurance, road licence, depreciation, interest on capital, salary of operating manager, etc.

(2) The cost unit used is composite like passenger-mile; Kilowatt-hour, etc.

It can be implemented in all firms of transport, airlines, bus-service, etc., and by all firms of distribution undertakings.

(c) Apportionment of Joint Cost amongst Joint Products using:

Market value at the point of separation

This method is used for apportionment of joint costs to joint products upto the split off point. It is difficult to apply if the market value of the product at the point of separation is not available. It is useful method where further processing costs are incurred disproportionately.

Net realizable value Method

From the sales value of joint products (at finished stage) the followings are deducted:

– Estimated profit margins

– Selling & distribution expenses, if any

– Post split off costs.

The resultant figure so obtained is known as net realizable value of joint products. Joint costs are apportioned in the ratio of net realizable value.

(d) (i) Pre-production Costs: These costs forms the part of development cost, incurred in making a trial production run, preliminary to formal production. These costs are incurred when a new factory is in the process of establishment or a new project is undertaken or a new product line or product is taken up, but there is no established or formal production to which such costs may be charged.

(ii) Research and Development Costs: Research costs are the costs incurred for the original and planned investigation undertaken with a prospect of gaining new scientific or technical knowledge and understanding.

Development costs are the cost incurred in applying research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems or services prior to the commencement of commercial production or use.

(iii) **Training Costs:** Costs which are incurred in and in relation to providing training to the workers, apprentices, executives etc. Training cost consists of wages and salaries paid to new trainees, fees paid to trainers, cost of materials and properties used to train the trainees, costs associated with training centre, loss suffered due to lower production and extra spoilage etc. The total cost of training section is thereafter apportioned to production centers.

PAPER – 5: AUDITING AND ETHICS

QUESTIONS

PART – I: Multiple Choice Questions based on Case Scenarios

Case Scenario

Aditya & Co. LLP are the statutory auditors of Benuka Furniture Ltd., a company engaged in the manufacture of wide range of office furniture that suits various workspaces ranging from home offices to corporate environments. The audit team is headed by CA Aditya, being the engagement partner who is further assisted by 2 articled assistants namely Rohit and Mudit. Before starting the audit work of the company, CA Aditya briefed the engagement team about the client's business, the various audit procedures the team can perform and the Standard on Auditing that the team needs to be complied with while conducting the audit of this company. While such discussions were going on, Mudit showed no inclination towards understanding the business and business environment of the company. He was of the view that as a member of the audit team he needs to obtain an understanding about the audit procedures to be performed during the course of audit and not about the client's business.

Rohit was asked by CA Aditya to verify the trade receivables, loan and advances given by the company, amounting to ₹ 20 crore and ₹ 20 lakhs respectively. Rohit asked the concerned official of the company to provide him with the ageing of trade receivables. Rohit decided to send confirmation requests to debtors having balance as on the balance sheet date exceeding ₹ 5 lakhs. He further decided to request to the third party in the request letters to reply positively whether the balance in their books tallies with the balance mentioned in the request letters. Also, while verifying the balance of loans and advances given by the company, Rohit selected the sample for checking without following any structured approach though he made sure to avoid any conscious biasness or predictability. Thus, he made sure that all the individual balances constituting the total of loans and advances given by the company had a chance of selection.

While checking the balances of fixed assets, Mudit asked the concerned employee of the company to provide him with various documents related to all the fixed assets appearing as on the balance sheet date. He asked for the title deeds with respect to the building owned by the company and the purchase bills for assets purchased by the company. While asking for such documents from the client company, Mudit was of the view that as a member of the audit team he can force the employee of the company to provide him with the required documents.

Further with respect to the inventory of the company, Mudit performed the audit procedures to verify that any inventory balance as at the year end does not include any element of next financial year.

Based on the above facts, answer the following MCQs:

1. Whether the view of Mudit regarding obtaining understanding of the client business is correct:

    (a) The view of Mudit is correct because as a member of the audit team, he needs an understanding only about the audit procedures to be performed by him.

    (b) The view of Mudit is not correct because while conducting an audit, the understanding of business and business environment of the client whose audit is to be conducted is very important.

    (c) The view of Mudit is partially correct because such understanding is required only for the engagement partner and not be the members of the audit team.

    (d) The view of Mudit is not correct because such information forms a crucial part of the audit report to be issued at the end of the audit process.

2. What kind of confirmation requests Rohit decided to send the debtors for verification of balances of trade receivables?

   (a) Negative confirmation.

   (b) Positive confirmation.

   (c) Exception letter.

   (d) Written Representation.

3. Which sample selection methods has been opted by Rohit while verifying the loans and advances given by the company?

   (a) Interval Sampling.

   (b) Block Sampling.

   (c) Haphazard Sampling.

   (d) Monetary Unit Sampling.

4. While verifying the inventory of the client company, which assertion is being verified by Mudit?

   (a) Cut Off assertion.

   (b) Valuation assertion.

   (c) Presentation & Disclosure assertion.

   (d) Rights & Obligations assertion.

5. With respect to fixed assets, which assertion does Mudit want to check.

   (a) Valuation assertion.

   (b) Presentation and Disclosure assertion.

   (c) Rights and obligations assertion.

   (d) Existence assertion.

General MCQs

6. CA Rocky is a recently qualified Chartered Accountant. He is appointed as an auditor of Sky Ltd. for the current Financial Year 2023-24. CA Rocky is of the view that he shall record all the matters related to audit i.e., audit procedures to be performed, audit evidence obtained

and conclusions reached. Thus, he maintained a file and recorded each and every finding during the audit. His audit file, also includes audit programmes, notes reflecting preliminary thinking, letters of confirmation, e-mails concerning significant matters, etc. State which of the following need not be included in the audit documentation?

(a) Audit programmes.

(b) E-mails concerning significant matters.

(c) Letters of confirmation.

(d) Notes reflecting preliminary thinking.

7. CA Ramesh has been the auditor of XYZ Ltd. for the past 10 years. Over these years, he has built a personal relationship with Mr. Rajan, CEO of the company. During the audit, CA Ramesh discovers several discrepancies, but he feels uncomfortable reporting these issues due to his personal relationship with Mr. Rajan. He has also accepted gifts from the company on several occasions. As a result, CA Ramesh is concerned about the impact of his long-standing relationship with Mr. Rajan on the audit report. Which threat to independence exists in the given case?

(a) Self-interest threat.

(b) Familiarity threat.

(c) Self-review threat.

(d) Advocacy threat.

8. CA Paras is auditing a firm's financial statements and performs detailed procedures to verify assertions. The firm is engaged in export of goods to Europe. The sales invoices raised in Euros are converted into Indian rupees as per applicable norms. He checks classification of expenses, ensures trade payables are genuine, compares current and past wages, examines title deeds for land, and check the accuracy of calculation of the conversion of foreign currency into Indian rupees for export invoices. Which audit procedure he performed to verify whether conversion of foreign currency into Indian rupees is proper or not?

(a) Inspection.

(b) Recalculation.

(c) Observation.

(d) Reperformance.

PART II – Descriptive Questions

Chapter 1 - Nature, Objective and Scope of Audit

9. XYZ Ltd., a manufacturing company based in India, operates multiple plants across the country and deals in complex machinery, which requires specialized maintenance and valuation expertise. XYZ Ltd. appointed CA Dhruv as Statutory auditor. During the audit, he observed that the management consistently applied the same method for valuation of inventory over the past few years, but this year, without proper disclosure, they switched to a different valuation method, which resulted in higher reported profits. Does such a matter fall within scope of audit?

Chapter 2 - Audit Strategy, Audit Planning and Audit Programme

10. ATL Pvt. Ltd., a leading manufacturing company, appointed CA Atul as an auditor for the year 2023-24. Given the complexity of the company's operations and the need for a systematic approach, he plans to design a detailed audit programme to ensure the accuracy of financial assertions. As a CA student, if you were assisting CA Atul in constructing this audit programme, what are the points you will keep in mind?

Chapter 3 - Risk Assessment and Internal Control

11. In an automated environment, General IT controls are policies and procedures that relate to many applications and support the effective functioning of application controls. It includes access security as well as program change. What are the objectives and activities included in access security and program change?

Chapter 4 - Audit Evidence

12. Grape Limited presented its financial statements for the F.Y. 2023-24 to its auditor for expressing an opinion thereon. The auditor while carrying out the audit started comparing various items of profit and loss account of the year under audit with previous financial years. What is auditor trying to achieve by carrying out those comparisons?

Chapter 5 - Audit of Items of Financial Statements

13. CA Tripti is in midst of conducting audit of a company engaged in manufacturing of range of bicycles in an industrial township located in a North Indian state. As part of its activities, the company procures bicycle components from various small and medium sized enterprises. Besides, company imports few bicycle components from China on credit terms. The auditor notices that company has huge trade payables reflected in its financial statements. He wants to be sure that all trade payables reflected in financial statements have been valued appropriately. Suggest few audit procedures to be performed in this respect.

Chapter 6 - Audit Documentation

14. CA Piku has prepared audit documentation of an entity describing nature, timing and extent of audit procedures performed during the course of audit. In documenting nature, time and extent of audit procedures performed, which matters shall be recorded? He is also of the view that such documentation alone as described above meets requirements of Standards on Auditing. Comment upon validity of his views.

Chapter 7 - Completion and Review

15. On reviewing internal control over inventories as part of statutory audit of a company, auditor finds that physical verification is not being conducted at regular intervals as stipulated by the management. The auditor finds it to be significant deficiency in internal control over inventories.

    He points it out to the management in a one-liner as under: -

    "Physical verification of inventories is not being conducted at regular intervals as stipulated by management."

    Is above communication by auditor proper? Ignore statutory reporting requirements, if any in this regard.

Chapter 8 - Audit Report

16. As per SA 701, the objectives of the auditor are to determine key audit matters and having formed an opinion on the financial statements,

communicate those matters by describing them in the auditor's report. Which factors are taken into account by auditor while determining Key Audit Matters? How Key Audit Matters are communicated in audit report?

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

17. A government department has been allocated a budget for infrastructure development. During the audit, the auditor observes the following:

    (i) Some payments were processed without proper approval from the competent authority.

    (ii) A large-scale project was implemented, but no assessment has been made regarding the expected benefits were achieved or not.

    (iii) Funds were utilised from an account for which no budgetary provision was made.

    (iv) Certain expenditures were made without following the prescribed financial regulations.

    (v) There were instances of unnecessary spending that did not align with financial propriety.

    Identify the different types of audits applicable to each of these observations.

Chapter 10 - Audit of Banks

18. While conducting the statutory audit of a large branch of KNB Bank for the year 2023-24, CA Hema observed that Profit and Loss account of branch reflects interest income of ₹ 80 crores and other income of ₹ 5 crores. She also noticed that few borrower accounts at branch have slipped into NPA category in past periods as well as in current year. Which audit procedures should be performed by her to verify reversal of income in the books of branch?

19. CBC Bank Ltd. has multiple loan accounts classified as Non-Performing Assets (NPAs). During the financial year, some borrowers made partial payments towards their outstanding dues. However, there was no explicit agreement between the bank and the borrowers regarding the

appropriation of these recoveries i.e., whether they should be adjusted against principal or interest.

The bank's finance team decided to recognise the recovered amount as interest income in its financial statements. However, during the statutory audit, the auditors raised concerns about the treatment of these recoveries.

Discuss the appropriate accounting treatment of partial recoveries in NPAs. Also, explain the principles that banks should follow in recognising interest income from NPAs.

Chapter 11 - Ethics and Terms of Audit Engagements

20. CA Puneet is appointed as an auditor of Kamla Limited for the F.Y. 2023-24. The management of Kamla Limited has requested the auditor to change the terms of original engagement as the company has diversified its business and a few new products have been introduced by the company. Whether CA Puneet can agree to the request made by the management? Under which circumstances can the client make a request to the auditor for a change in the terms of engagement?

SUGGESTED ANSWERS

PART – I: Answers to Multiple Choice Questions

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

PART – II: Answers to Descriptive Questions

9. The purpose of an audit is to enhance the degree of confidence of intended users in the financial statements. The scope of audit of financial statements includes coverage of all aspects of entity, reliability and sufficiency of financial information and proper disclosure of financial information.

In the given situation, CA. Dhruv observed that the management consistently applied the same method for valuation of inventory over the past few years, but this year, without proper disclosure, they switched to a different valuation method, which resulted in higher profits. Since proper disclosure of financial information is covered under the scope of audit, thus, the auditor should decide whether relevant information is properly disclosed in the financial statements. He should also keep in mind applicable statutory requirements in this regard.

The management responsible for preparation and presentation of financial statements makes many judgments in this process of preparing and presenting financial statements. For example, choosing appropriate accounting policies in relation to various accounting issues like choosing method of charging depreciation on fixed assets or choosing appropriate method for valuation of inventories.

The auditor evaluates selection and consistent application of accounting policies by management; whether such a selection is proper and whether chosen policy has been applied consistently on a period-to-period basis.

Thus, it can be concluded that proper disclosure of financial information is well within scope of audit.

10. For the purpose of programme construction, the following points should be kept in mind:

(i) Stay within the scope and limitation of the assignment.

(ii) Prepare a written audit programme setting forth the procedures that are needed to implement the audit plan.

(iii) Determine the evidence reasonably available and identify the best evidence for deriving the necessary satisfaction.

(iv) Apply only those steps and procedures which are useful in accomplishing the verification purpose in the specific situation.

(v) Include the audit objectives for each area and sufficient details which serve as a set of instructions for the assistants involved in audit and help in controlling the proper execution of the work.

(vi) Consider all possibilities of error.

(vii) Co-ordinate the procedures to be applied to related items.

11. Access Security in Automated Environment:

The objective of Access Security is to ensure that access to programs and data is authenticated and authorized to meet financial reporting objectives.

Activities:

(i) Security Organization & Management

(ii) Security Policies & Procedures

(iii) Application Security

(iv) Data Security

(v) Operating System Security

(vi) Network Security

(vii) Physical Security

Program Change in Automated Environment:

The objective of program change controls is to ensure that modified systems continue to meet financial reporting objectives.

It includes activities such as change in management process, recording, managing and tracking change requests, making and testing changes etc.

12. Purpose of Applying Analytical Procedure: Analytical procedures use comparisons and relationships to assess whether account balances or other data appear reasonable.

The auditor of Grape Ltd. would achieve the following by carrying out the comparison stated in the question:

(i) If balances included in the Statement of Profit and Loss of an entity are compared with those contained in the Statement of Profit and Loss with that of the previous period, it would be possible to find out the reasons for increase or decrease in the amount of profits of those years.

(ii) By setting up certain expenses' ratios on the basis of balances included in the Statement of Profit and Loss, for the year under audit, comparing them with the same ratios for the previous year, it is possible to ascertain the extent of increase or decrease in various items of expenditure in relation to sales and that of trading profit in relation to sales.

(iii) If differences are found to be material, the auditor would ascertain the reasons thereof and assess whether the accounts have been manipulated to inflate or suppress profits.

(iv) It may help identify the existence of unusual transactions or events, and amounts, ratios, and trends that might indicate matters that have audit implications.

13. Audit procedures to be performed to verify that all trade payables reflected in financial statements have been valued appropriately are:

- Review the process followed by the Company to identify if any old creditor balance needs to be written back. This will include a consistency comparison with the method used in the last year, and a determination of whether the method is appropriate for the underlying business environment.
- Obtain the ageing of payable balances, and the list of vendors with whom the Company has disputes and any claims from customers, under litigation and compare with previous year.

- Check that write backs in the trade payable balances assessed as no longer payable have been approved by an appropriate and authorised member of senior management, for example, CEO/MD.
- Check that the restatement of foreign currency trade payables has been done properly in accordance with AS 11.
- Understand management's process to identify the principal amount and the interest due thereon (if any) remaining unpaid to any Micro, Small and Medium Sized Enterprises suppliers at the end of accounting year. Test check the management process to assess if the auditor could rely on the management process.

14. In documenting the nature, timing and extent of audit procedures performed, the auditor shall record:

(a) The identifying characteristics of the specific items or matters tested.

(b) Who performed the audit work and the date such work was completed; and

(c) Who reviewed the audit work performed and the date and extent of such review.

The auditor shall prepare audit documentation that is sufficient to enable an experienced auditor, having no previous connection with the audit, to understand:

(a) The nature, timing and extent of the audit procedures performed.

(b) The results of the audit procedures performed, and the audit evidence obtained; and

(c) Significant matters arising during the audit and the conclusions reached thereon and significant professional judgements made in reaching those conclusions.

Thus, all above matters shall be recorded to meet requirements of SA 230. Documenting nature, time and extent of audit procedures performed alone does not meet the requirements of SA 230. Therefore, CA Piku's views are not valid.

15. As per SA 265, "Communicating Deficiencies in Internal Control to Those Charged with Governance and Management", while pointing out significant deficiencies in internal control, auditor has not only to communicate significant deficiencies giving their description but also explain the potential effects and sufficient information to those charged with governance and management to understand context of communication.

In the given situation, auditor noticed significant deficiency in internal control over inventories and he pointed out the same to management i.e. "Physical verification of inventories is not being conducted at regular intervals as stipulated by management."

Therefore, the above communication is not proper. Not only significant deficiency has to be communicated, it should also be explained to management the potential effects of not carrying out physical verification of inventories at regular intervals as stipulated by management. It should explain that such a significant deficiency can lead to misstatement of inventories impacting profits of the company. Highlighting the importance of such a control, it should be stated that responsibility be fixed for concerned person(s) for adhering to such an important control.

16. The auditor shall determine, from the matters communicated with those charged with governance, those matters that required significant auditor attention in performing the audit. In making this determination, the auditor shall take into account the following:

- Areas of higher assessed risk of material misstatement, or significant risks identified in accordance with SA 315.
- Significant auditor judgements relating to areas in the financial statements that involved significant management judgement, including accounting estimates that have been identified as having high estimation uncertainty.
- The effect on the audit of significant events or transactions that occurred during the period.

The auditor shall determine which of the matters determined, as stated above, were of most significance in the audit of the financial statements of the current period and therefore are the key audit matters.

The auditor shall describe each key audit matter, using an appropriate subheading, in a separate section of the auditor's report under the heading "Key Audit Matters". The introductory language in this section of the auditor's report shall state that:

(a) Key audit matters are those matters that, in the auditor's professional judgement, were of most significance in the audit of the financial statements [of the current period]; and

(b) These matters were addressed in the context of the audit of the financial statements as a whole, and in forming the auditor's opinion thereon, and the auditor does not provide a separate opinion on these matters.

17. The audit of government expenditure is one of the major components of government audit. The basic standards set for audit of expenditure are to ensure that there is provision of funds authorised by competent authority fixing the limits within which expenditure can be incurred.

(i) When payments are processed without proper approval from the competent authority, an Audit of Sanctions is required. This ensures that there is sanction, either special or general, accorded by competent authority authorising the expenditure.

(ii) In cases where a large-scale project has been implemented without any assessment of whether the expected benefits were achieved, a Performance Audit is necessary. This type of audit ensures that the various programmes, schemes and projects where large financial expenditure has been incurred are being run economically and are yielding results expected of them.

(iii) When funds were utilised from an account for which no budgetary provision was made, an Audit Against Provision of Funds is conducted. This ensures that there is a provision of funds out of which expenditure can be incurred and the same has been authorised by competent authority.

(iv) If expenditures are made without adhering to the prescribed financial regulations, an Audit Against Rules and Orders is applicable. This audit ensures that the expenditure incurred conforms to the relevant provisions of the statutory enactment and in accordance with the Financial Rules and Regulations framed by the competent authority.

(v) Instances of unnecessary spending that do not align with financial propriety fall under the scope of a Propriety Audit. It ensures that the expenditure is incurred with due regard to broad and general principles of financial propriety.

18. The following audit procedures should be performed to verify reversal of income in books of branch:

- If any advance, including bills purchased and discounted, becomes NPA as at the close of any year, the entire interest accrued and credited to income account in the past periods, should be reversed or provided for if the same is not realised. This will apply to Government guaranteed accounts also.
- In respect of NPAs, fees, commission and similar income that have accrued should cease to accrue in the current period and should be reversed or provided for with respect to past periods, if uncollected.
- Further, in case of banks which have wrongly recognised income in the past should reverse the interest if it was recognised as income during the current year or make a provision for an equivalent amount if it was recognised as income in the previous year(s).
- Furthermore, the auditor should enquire if there are any large debits in the Interest Income account that have not been explained. It should be enquired whether there are any communications from borrowers pointing out differences in interest charge and whether appropriate action has been taken in this regard.

19. Appropriate accounting treatment of partial recoveries in NPAs:

In the absence of a clear agreement between the bank and the borrower for the purpose of appropriation of recoveries in NPAs (i.e., towards principal or interest due), banks are required to adopt an accounting policy and exercise the right of appropriation of recoveries in a uniform and consistent manner.

The appropriate policy to be followed is to recognise income as per AS 9, "Revenue Recognition", when certainty attaches to realisation and accordingly amount reversed/derecognised or not recognised in the past should be accounted.

Interest partly/fully realised in NPAs can be taken to income. However, it should be ensured that the credits towards interest in the relevant accounts are not out of fresh/additional credit facilities sanctioned to the borrowers concerned.

20. The auditor may decide not to send a new audit engagement letter or other written agreement each period. However, a significant change in nature or size of the entity's business is one of the factors which may make it appropriate to revise the terms of the audit engagement.

In the given situation, Kamla Limited has diversified its business, and few new products have also been introduced by the company which is indicative of significant change in nature or size of the entity's business. In view of the above, CA. Puneet can agree to the request made by the management to change the terms of the audit engagement. Therefore, the request of Management to change the terms of audit engagement is appropriate.

A request from the client for the auditor to change the engagement may result from:

1. a change in circumstances affecting the need for the service.
2. a misunderstanding as to the nature of an audit or related service originally requested.
3. a restriction on the scope of the engagement, whether imposed by management or caused by circumstances.

PAPER – 6: FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT

6A: FINANCIAL MANAGEMENT

QUESTIONS

Division A: Case Scenarios

Investment Decision

1. Linty is a small-sized firm manufacturing company. Its manufacturing plant is situated in Chattisgarh. Currently, company is labour oriented due to which there is less production, delay in deliveries and more defects in production. The management of the company is considering the proposal to purchase a new automatic machine which will carry out some operations which are at present performed by manual labour. There are two alternative models of the machine that are available in the market. Machine TMT 1 and TMT 2. If machine is replaced, it would provide labor saving and reduce the defects as well. It is expected to have to have an economic life of 10 years for both the models. The following details are collected:

	Machine	
	TMT 1 (₹)	TMT 2 (₹)
Cost of Machine	45,00,000	50,00,000
Estimated saving in direct wages per annum	15,00,000	20,00,000
Estimated saving in scrap per annum	5,00,000	6,00,000
Estimated additional cost of indirect material per annum	2,00,000	2,00,000

Estimated additional cost of indirect labour per annum	1,50,000	1,80,000
Estimated additional cost of repairs and maintenance per annum	4,00,000	8,00,000

Depreciation is charged using straight line method over the useful life. Company is in 35 percent tax bracket and expected rate of return may be 15 percent.

Being a finance manager of the company, you are required to evaluate the alternatives by answering the followings:

i. What is the annual saving from Machine TMT 1?

A. ₹ 5,20,000

B. ₹ 5,98,000

C. ₹ 9,70,000

D. ₹ 10,98,000

ii. What is the annual saving from Machine TMT 2?

A. ₹ 5,20,000

B. ₹ 5,98,000

C. ₹ 9,70,000

D. ₹ 10,98,000

iii. What is the payback period of Machine TMT 1 and TMT 2 Respectively?

A. 3.60 years and 4.60 years

B. 4.25 years and 4.42 years

C. 4.63 years and 4.55 years

D. 4.55 years and 4.42 years

iv. What is the Accounting (Average) Rate of Return of Machine TMT 1 and TMT 2 Respectively?

A. 20% and 22%

B. 23.11% and 23.92%

C. 22.21% and 23.11%

D. 23.92% and 22.21%

v. What is the Profitability Index (PI) of Machine TMT 1 and TMT 2 Respectively?

A. 1.10 and 1.05

B. 0.98 and 1.01

C. 1.19 and 1.08

D. 1.08 and 1.10

Financing Decision - Cost of Capital

2. The shares of ACB Ltd. are presently traded at ₹ 51 and the company is expected to pay dividends of ₹ 5 per share with a growth rate expected at 10% per annum. It plans to raise fresh equity share capital. The merchant banker has suggested that an underpricing of ₹ 2 is necessary in pricing the new issue besides involving a cost of ₹ 50 paise per share on miscellaneous expenses. The cost of new equity shares (assuming no change in dividend rate and growth rate) will be:

(A) 18%

(B) 17.5%

(C) 18.25%

(D) 20.31%

Financing Decision – Leverages

3. RGT Infrastructure Company has a degree of operating leverage of 3 at a sales level of ₹ 7,00,000 and operating income of ₹2,20,000. Fall in sales of the company by 10% will result in decrease in operating income of:

(A) ₹ 80,000

(B) ₹ 55,000

(C) ₹ 66,000

(D) ₹ 40,000

Division B: Descriptive Questions

Financial Analysis & Planning – Ratio Analysis

4. Using the information given below, PREPARE the Balance Sheet of Nevy Private Limited –

Particulars	**Details**
Stock turnover Ratio	15 times
Cash and Bank balance	10% of Current Assets (net off prepaid exp)
GP Ratio	20%
Creditors turnover (cost of goods sold) ratio	10 times
Debtors turnover ratio	12 times
Net Fixed Assets	25% of Total Liabilities
Depreciation	15% on Opening WDV
Current Ratio	1.6 : 1
Capital Gearing Ratio	0.6 : 1

All Purchases and Sales are assumed to be on credit basis.

Balance Sheet of Nevy Private Limited as of 31.03.2025

Particulars	**Amount (₹)**	**Amount (₹)**
A] Equities and Long Term Liabilities		
Share Capital	**36,00,000**	
Reserves and Surplus	**??**	
14% Bonds	**??**	**???**
B] Current Liabilities		
Trade Payables	**??**	
Outstanding expenses and provisions	**??**	
(*Net of Prepaid expenses of ₹7,50,000)		**45,00,000**
TOTAL		**?????**

C] Fixed Assets		
Opening WDV	**??**	
(-) Depreciation	**??**	**???**
D] Current Assets		
Inventory	**??**	
Trade Receivables	**??**	
Cash and Bank Balance	**??**	
		???
TOTAL		**?????**

(All the working notes should form part of your answer)

Financing Decision - Cost of Capital

5. Paramhans Limited has a capital structure that consists of Equity share capital, Reserves & Surplus, Bank term loan, Debentures which are redeemable at a premium of 5% and Preference share capital redeemable at premium of 5%. The coupon rate on debentures is 1.5 times of that of bank term loan coupon rate whereas the preference dividend rate is 1.5 times of debentures' interest rate. Tenure for the bank term loan, debentures and preference share capital is 3 years, 5 years and 7 years respectively.

   The current book value of the capital structure is as follows –

Particulars	**Amount (₹)**
Equity Share Capital (FV = ₹ 100)	25,00,000
Reserves And Surplus	10,00,000
Bank Term Loan	10,00,000
Debentures (FV = ₹ 100)	15,00,000
Preference Share Capital (FV = ₹ 100)	20,00,000
TOTAL	**80,00,000**

Tax rate applicable to the company is 25%.

Debentures are currently selling at a price of ₹ 96 whereas Preference shares are currently selling at ₹ 102. The equity shares of the company are quoted at ₹ 150 per share. The ongoing P/E ratio for the shares of Paramhans Limited is at 6.667 times. Paramhans Limited belongs to a risk class where the overall capitalization and discounting rate of the company is at 20%

CALCULATE –

(A) Rate of Interest on Bank term Loan & Debentures

(B) Rate of Preference dividend

(C) WACC using Market Value weights

Financing Decision - Capital Structure

6. Namra Limited provides you with the following information –

Particulars	**Amount (₹)**
Operating Profit	6,20,000
Less: Interest on Debentures @ 10%	(80,000)
EBT	5,40,000
Less: Tax @ 20%	(1,08,000)
PAT	4,32,000
Less: 14% Preference Dividend	(1,12,000)
Earnings for Equity Share Holders	3,20,000
No of Equity Shares (₹ 10 Each)	16,000
EPS	20

The Reserves & Surplus of the company is at ₹ 9,00,000 and Namra Limited requires additional funds of ₹ 15,00,000 for modernization and expansion. The current capitalization rate for the equity is 20% and company has a policy to retain 40% of its earnings. The debentures and preference shares are trading at premium of 10% & 25% to its current book value respectively. The fair value of equity shares is calculated by dividing the number of equity shares to the Overall Value of the firm.

New equity shares for expansion will be issued 15% discount to the current fair value price.

Return on Capital Employed (ROCE) which is based on the total value of the firm, will increase by 10% to its current rate after expansion and modernization. If the capital gearing ratio goes above 2.50 then interest rate on additional debt will increase by 200 basis points and dividend on preference shares would increase by half a percentage.

You are required to ADVISE on the below two financial plan to be selected based on earnings.

(i) Two-third amount is raised through debenture and remaining by preference share.

(ii) Issue of equity shares only.

Financing Decision – Leverages

7. Details of Kshitij Limited are given below for the year ended 31st March 2025 –

Particulars	**Details**
Sales	₹ 180 lakhs
Fixed Cost (Excl Interest)	₹ 45 lakhs
B.E.P Sales	₹ 120 lakhs
Equity Share Capital of ₹ 100 Each	₹ 150 lakhs
Income Tax Rate	25%
Cost Of Debt (Kd)	9%
Debt	₹ 90 lakhs

Required to CALCULATE -

(A) Operating, Financial, Combined Leverage & P/V Ratio

(B) Return on Capital Employed and EPS

(C) Does Kshitij Limited have favorable Financial Leverage?

(D) % Change in EPS, if EBIT increases or decreases by 15%

(E) At what level of Sales, the PAT will be equal to 3/4th of its current value.

Dividend Decision

8. Mr. A had gathered the following information for his analysis –

(A) A Company pays regular dividend on quarterly basis and the last interim dividend declared for the quarter was ₹ 3 per share

(B) Owing to a wide market reach and presence, company's turnover has seen an annual compounded growth of 25% (CAGR) in the last 5 years and the turnover is expected to grow at the same rate in the future as well. The company expects the following Rate of Return (ROI) against the probabilities of likely achievement mentioned along with in different situations.

Scenario	ROI	Probability
I	20%	0.30
II	15%	0.60
III	12%	0.50

(C) The retention ratio over the last 5 years has been 40%, 65%, 50%, 45%, 30% respectively and company plans to retain based on the past average.

(D) The current interest rate on GOI Treasury bond is at 4.5% and the beta of the company is 1.3 and a market return of 12.5%

You are required to CALCULATE the theoretical market price of the company's share for Mr. A's decision-making using Gordon's model and Walter's model.

Management of Working Capital

9. The management of Parshvam Limited is planning to expand its business at international level and consults you for preparing and estimation of working capital needs so that they can avail the finance from the bank. The estimated data of Parshvam Limited reveal the following information –

Particulars	**Amount (₹)**
Materials Used Domestic on 2 months credit Imports on 3 months credit **	 9,00,000 6,00,000
Lag in Payment of wages - 1 month	6,00,000
Lag in Payment of Manufacturing Overheads – ½ Month	26,40,000
Sales Domestic on 1.5 months credit Export on 3 months credit (sale price 10% below domestic price)	 30,00,000 24,80,000
Administrative expenses payable in advance for 2 months	3,60,000
Lag in payment of Selling & Distribution expenses – 1 month	3,00,000

Advance Income tax for ₹25,000 for the quarter falling in the next financial year is paid by the company. Manufacturing overheads is inclusive of depreciation on the new machine purchased for tailor-made export products. The purchase price for the new machine is ₹24,00,000 with a depreciation rate of 10%. Cash Gross profit is at 20% on domestic sales.

However, to promote exports, Export Promotion Council (EPC Board) provides a revenue subsidy of 2.5% for the new machine purchased. Furthermore, Parshvam Limited submits the letter of credit (LOC) to its bank and avails the all-Export Sales value within 1 month. Financial institution charges a fee of 5% for the same.

The company keeps one month stock of raw materials and finished goods each. Goods remain in process for half a month with 90% raw materials introduced in the process. The company believes in keeping cash and bank balance of ₹1,50,000. The management is of the opinion that the safety margin is to be kept at 15%.

**Raw materials imported will attract a custom duty at 20% to be paid up front with a duty drawback of 5% credited upfront. You are required to -

(A) PREPARE the estimated working capital statement for the next year.

(B) ADVISE whether Parshvam Limited should continue with the export business or not.

(Requisite assumptions and notes should form part of the solution).

Miscellaneous

10. (a) Explain as to how the wealth maximisation objective is superior to the profit maximisation objective.

(b) Explain some common methods of venture capital financing.

SUGGESTED ANSWERS

1. **i.** **A.** ₹ 5,20,000

ii. **B.** ₹ 5,98,000

Working Notes:

Depreciation on Machine TMT 1 $= \frac{45,00,000}{10}$

$=$ ₹ 4,50,000

Depreciation on Machine TMT 2 $= \frac{50,00,000}{10}$

$=$ ₹ 5,00,000

Particulars	**Machine TMT 1 (₹)**	**Machine TMT 2 (₹)**
Annual Savings:		
Direct Wages	15,00,000	20,00,000
Scraps	5,00,000	6,00,000
Total Savings (A)	20,00,000	26,00,000

Annual Estimated Cash Cost :		
Indirect Material	2,00,000	2,00,000
Indirect Labour	1,50,000	1,80,000
Repairs and Maintenance	4,00,000	8,00,000
Total Cost (B)	7,50,000	11,80,000
Annual Cash Savings (A-B)	12,50,000	14,20,000
Less: Depreciation	4,50,000	5,00,000
Annual Savings before Tax	8,00,000	9,20,000
Less: Tax @ 35%	2,80,000	3,22,000
Annual Savings /Profits after tax	5,20,000	5,98,000
Add: Depreciation	4,50,000	5,00,000
Annual Cash Inflows	9,70,000	10,98,000

iii. **C.** 4.63 and 4.55 years

$$\text{Payback Period} = \frac{\text{Total Initial Capital Investment}}{\text{Annual expected after tax net cashflow}}$$

$$\text{Machine TMT 1} = \frac{45,00,000}{9,70,000}$$

$$= 4.63 \text{ years}$$

$$\text{Machine TMT 2} = \frac{50,00,000}{10,98,000}$$

$$= 4.55 \text{ years}$$

iv. **B.** 23.11% and 23.92%

Accounting (Average) Rate of Return (ARR)

$$= \frac{\text{Average Annual Net Savings}}{\text{Average investment}} \times 100$$

$$\text{Machine TMT 1} = \frac{5,20,000}{22,50,000} \times 100$$

$$= 23.11\%$$

$$\text{Machine TMT 2} = \frac{5,98,000}{25,00,000} \times 100$$

$$= 23.92\%$$

v. **D.** 1.08 and 1.10

Present Value Cash Inflow = Annual Cash Inflow x PV factor at 15% Machine TMT 1

= 9,70,000 x 5.019 = ₹ 48,68,430

Machine TMT 2 = 10,98,000 x 5.019 = ₹ 55,10,862

Profitability Index or PV Index = $\frac{\text{Present Value of Cash Inflow}}{\text{Investment}}$

Machine TMT 1 $= \frac{48,68,430}{45,00,000}$

= 1.08

Machine TMT 2 $= \frac{55,10,862}{50,00,000}$

= 1.10

2. **D.** 20.31%

Ke $= \frac{D1}{NP} + g$

Net proceeds per share = P0 - underpricing – Floatation cost = 51−2−0.50=48.50

Ke $= \frac{5}{48.50} + 0.10$

= 20.31%

3. **C.** ₹ 66,000

% Change in Operating Income = Degree of Operating Leverage (DOL) × % Change in Sales

% Change in Operating Income = 3 × (−10%) = −30%

Decrease in Operating Income = 30% of 2,20,000

= ₹ 66,000

4. Balance Sheet of Nevy Private Limited as of 31.03.2025

Particulars	Notes	Amount (₹)	Amount (₹)
A] Equities and Long Term Liabilities			
Share Capital		36,00,000	
Reserves and Surplus	WN-7	1,18,750	
14% Bonds	Bal. Fig.	22,31,250	59,50,000
B] Current Liabilities			
Trade Payables	WN-6	40,30,244	
Outstanding expenses and provisions	Bal. Fig.	4,69,756	45,00,000
(*Net of Prepaid expenses of ₹ 7,50,000)			
TOTAL			**1,04,50,000**
C] Fixed Assets			
Opening WDV	WN-3	32,94,118	
(-) Depreciation	WN-3	(4,94,118)	28,00,000 (WN-2)
D] Current Assets			
Inventory	WN-5	26,86,829	
Trade Receivables	WN-5	41,98,170	
Cash and Bank Balance	WN-4	7,65,000	76,50,000 (WN 1)
TOTAL			**1,04,50,000**

WN 1 – Calculation of Current Assets using Current Ratio

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

CL = 45,00,000 + 7,50,000

= 52,50,000

1.6 = CA / 52,50,000

Therefore CA = 84,00,000

CA = Inventory + Trade Receivables + Cash Bank Balance + Prepaid Exp

84,00,000 = Inventory + Trade Receivables + Cash Bank Balance + 7,50,000

Therefore, total of Inventory + Trade Receivables + Cash Bank Balance = 76,50,000

WN 2 – Calculation of Fixed Assets & Total Assets

Fixed Assets = 25% of Total liabilities or 25% of Total Assets which means

Current Assets = 75% of Total liabilities or 75% of Total Assets

Fixed Assets + Current Assets = Total Assets/Total Liabilities

25 + 75 = 100

Fixed Assets = 84,00,000 x 25/75 = 28,00,000

Total Assets = 1,12,00,000

WN 3 – Calculation of Depreciation and Opening WDV of Fixed Assets

Opening WDV - Depreciation = Closing WDV

100 - 15 = 85

Therefore, Depreciation = 28,00,000 x 15/85 = 4,94,118

Opening WDV = 32,94,118

WN 4 – Calculation of Cash & Bank Balance

Cash & Bank Balance = 10% of (CA – Prepaid Exp)

Cash & Bank balance = 10% of (84,00,000 – 7,50,000)

Therefore, cash and bank balance = 7,65,000

WN 5 – Calculation of Inventory & Trade receivables

Total CA = Inventory + Trade Receivables + Cash Bank Balance + Prepaid Exp

84,00,000 = Inventory + Trade Receivables + 7,65,000 + 7,50,000

Inventory + Trade Receivables = 68,85,000

Now, Let Sales be X

GP Ratio = 20% = 0.2X

COGS = 80% = 0.8X

Debtors T/O Ratio $= \frac{\text{Net Credit Sales}}{\text{Debtors}}$

12 $= \frac{X}{\text{Debtors}}$

Debtors = X / 12

Inventory T/O Ratio = COGS/Inventory

15 = 0.8X/Inventory

Inventory = 0.8X/15

Inventory + Trade Receivables = 68,85,000

0.8X / 15 + X / 12 = 68,85,000

Therefore X = Sales = 5,03,78,050

COGS = 4,03,02,440

Trade Receivables = 41,98,170

Inventory = 26,86,829

WN 6 – Calculation of Trade Payables using Creditors Turnover Ratio

Creditors T/O Ratio $= \frac{\text{COGS}}{\text{Trade Payables}}$

10 $= \frac{4{,}03{,}02{,}440}{\text{Trade Payables}}$

Trade Payables = 40,30,244

WN 7 – Calculation of Reserves and Surplus & 14% Bonds

Total Capital Employed = Share Cap + R&S + Bonds

Capital Gearing Ratio = Capital bearing Fixed % /Capital not bearing fixed %

0.6 = Bonds/Share Capital + R&S

Therefore, Bonds = 21,60,000 + 0.6 R&S

Substituting the value of bonds in the above equation,

Total Capital Employed = Share Cap + R&S + (21,60,000 + 0.6 R&S)

59,50,000 = 36,00,000 + 1.6 R&S + 21,60,000

Therefore R&S = 1,18,750

5. **(A)** Calculation of Interest rate on Bank term Loan & Debentures

Let the rate of interest on bank term loan be 'X'

Therefore, Rate of Interest on debentures = 1.5X

Rate of Preference dividend = 1.5 x 1.5X = 2.25X (1.5 times of debentures interest rate)

Now, lets calculate Kd (term loan), Kd (debentures), Kp (Pref. shares) & Ke

Kd (Term loan) = Int (1 – t)

= X (1 – 0.25)

Kd (Term loan) = 0.75X

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

RV = 100 + 5% = ₹ 105

NP = Issue Price / Market price = ₹ 96

$$= \frac{150X(1-0.25)+\dfrac{(105-96)}{5}}{\dfrac{(105+96)}{2}}$$

Kd (Debentures) = $\dfrac{112.5X+1.8}{100.5}$

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

RV = 100 + 5% = ₹ 105

NP = Issue price / Market price = ₹ 102

Therefore Kp $= \dfrac{225X + (105 - 102\ /\ 7)}{(105 + 102)/\ 2}$

Kp $= \dfrac{225X + 0.4286}{103.5}$

Ke $= \dfrac{1}{\text{PE Ratio}}$

$= \dfrac{1}{6.667}$

Therefore, Ke = 15%

Kr = Ke = 15% (In absence of information on opportunity cost)

Overall Capitalization rate (Ko) = 20% (given)

Sources of capital	Amount of capital	Weights (W)	Cost (K)	W x K
Equity share capital	25,00,000	0.3125	15	4.6875
Reserves & surplus	10,00,000	0.1250	15	1.8750
Bank term loan	10,00,000	0.1250	0.75X	0.09375X
Debentures	15,00,000	0.1875	$\frac{112.5X + 1.8}{100.5}$	$\frac{21.094X + 0.3375}{100.5}$
Preference share capital	20,00,000	0.2500	$\frac{225X + 0.4286}{103.5}$	$\frac{56.25X + 0.1072}{103.5}$
	80,00,000	**1.0000**	**Ko /WACC**	**20%**

$$20 = 4.6875 + 1.8750 + 0.09375X + \frac{21.094X + 0.3375}{100.5} + \frac{56.25X + 0.1072}{103.5}$$

On solving the above equation,

$$13.4375 = 0.09375X + \frac{(2183.2\ X + 34.931 + 5653.125X + 10.774)}{10{,}401.75}$$

$$1{,}39{,}773.52 = 975.16X + 2{,}183.2\ X + 5{,}653.125X + 45.705$$

$$1{,}39{,}727.815 = 8{,}811.485X$$

X = Rate of Interest on Bank term Loan = 15.86%

Rate of Interest on Debentures = 15.86 x 1.5 = 23.79%

Rate of Preference Dividend = 15.86 x 2.25 = 35.68%

(B) Calculation of WACC using Market Value weights

Sources	Market value	Weights (W)	Cost (K)	W x K
Equity share capital	37,50,000	**0.456**	**15.000**	**6.83**
Bank term loan	10,00,000	**0.122**	12.023	**1.46**
Debentures	14,40,000	**0.175**	18.034	**3.16**
Preference share capital	20,40,000	**0.248**	27.051	**6.71**
Total	**82,30,000**	**1**	**Ko /WACC**	**18.16**

WN – Calculation of Market Value of each capital sources

MV of Equity = 25,000 x 150 = 37,50,000

**MV of Reserves & Surplus = Already Included in the Equity Above

MV of Term Loan = 10,00,000

MV of Debentures = 15,000 x 96 = 14,40,000

MV of Pref. Shares = 20,000 x 102 = 20,40,000

6.

Particulars	**Additional Funds : Debentures = 15,00,000 x 2/3 Pref = 15,00,000 x 1/3**	**Additional Funds : 100% Equity**
Operating Profit **Wn – 1**	9,55,776	9,55,776
Less: Interest Exp Current Additional (10,00,000 X 12%) **Wn - 2**	 (80,000) (1,20,000)	 (80,000) -
EBT	7,55,776	8,75,776
Less: Tax @ 20%	(1,51,155)	(1,75,155)
EAT	6,04,621	7,00,621
Less: Preference Dividend Current Additional (5,00,000 X 14.5%) **Wn - 2**	 (1,12,000) (72,500)	 (1,12,000) -
Earnings for Equity Shareholders	4,20,121	5,88,621
No of Equity Shares Current Additional **Wn - 3**	 16,000 -	 16,000 7,550
EPS	**26.26**	**25.00**

WN 1 – Calculation of EBIT after expansion

As given in the question, ROCE is based on the total value of firm, so first step would be to calculate the total value of the firm

Value of Firm = Value of Debt + Value of Pref shares + Value of Equity + Value of R/S

$$\text{Value of Debt (Vd)} = \frac{\text{Interest (₹)}}{\text{Interest \%}} + 10\% \text{ premium}$$

$$= \frac{80,000}{0.10} + 10\% \text{ premium}$$

= ₹ 8,80,000

Value of Preference (Vp) $= \dfrac{\text{Pref Div (₹)}}{\text{Pref Div \%}}$ + 25% premium

$= \dfrac{1,12,000}{0.14}$ + 25% premium

= 10,00,000

Value of Equity share capital (Ve) $= \dfrac{\text{Dividend}}{\text{Ke}}$

$= \dfrac{3,20,000 \times 0.6}{0.20}$

= 9,60,000

Value of R/S = 9,00,000

Therefore, Value of Firm (Vf) = 8,80,000 + 10,00,000 + 9,60,000 + 9,00,000

= 37,40,000

ROCE (Before expansion) $= \dfrac{\text{EBIT}}{\text{Total value of the firm}}$

$= \dfrac{6,20,000}{37,40,000}$

= 16.58%

ROCE (After expansion) = 16.58 + 1.658 (i.e 16.58 + 10%)

= 18.24%

EBIT (After expansion) = (37,40,000 + 15,00,000) x 18.24%

= ₹ 9,55,776

WN 2 – Calculation of Interest on additional debt and Preference dividend on additional Preference share capital

Condition – If the capital gearing ratio goes above 2.50, then additional debt raised would be at higher rate of interest and additional Preference shares would also be raised at higher preference dividend rate

Capital gearing ratio when Additional funds are raised through additional debt and preference share capital.

Capital gearing ratio $= \dfrac{8,00,000 + 8,00,000 + 15,00,000}{1,60,000 + 9,00,000}$

Capital gearing ratio = 2.92

Since it is greater than 2.50, Interest on Debt = 10% + 2% (200 basis points)
= 12%

Preference Dividend = 14% + 0.5% = 14.5%

WN 3 – Calculation of Additional No of Equity shares when funds are raised through equity

Fair value of equity shares before issuing new equity share

$= \dfrac{\text{Total Value of the firm}}{\text{No of existing equity shares}}$

$= \dfrac{37,40,000}{16,000}$

= ₹ 233.75

Issue Price = 233.75 - 15% Discount = ₹ 198.69

Therefore, No of New Equity shares to be issued

$= \dfrac{\text{Additional Funds to be raised}}{\text{Fair value}}$

$= \dfrac{15,00,000}{198.69}$

= 7549.45 shares approx. 7550 shares

Comment – It is advisable for Namra Limited to raise the additional funds through a mix of debentures and preference as EPS is maximum

7.

Particular	**Amount (₹)**
Sales	180 lakhs
Contribution (180 x 37.5%) **WN - 1**	**67.50 lakhs**
(-) Fixed Cost	(45.00) lakhs
EBIT	**22.50 lakhs**
(-) Interest Exp **WN - 2**	(10.80) lakhs

EBT	**11.70 lakhs**
(-) Tax @ 25%	(2.925) lakhs
EAT	**8.775 lakhs**
No of Equity Shares **EPS**	**1.50 lakhs** **₹ 5.85**

(A) Calculation of OL, FL, CL & P/V Ratio

WN 1 – Calculation of P/V Ratio

$$\text{B.E.P Sales} = \frac{\text{Fixed Cost}}{\text{PV Ratio}}$$

PV Ratio = 45 / 120 = 37.5%

WN 2 – Calculation of Interest Exp

Kd = Interest (1 – t)

9 = Interest (1 – 0.25)

Interest = 12%

Interest Exp = 90 Lakhs x 12% = ₹ 10.8

$$\text{OL} = \frac{1}{\text{Margin of Safety (MOS)}}$$

$$\text{MOS} = \frac{\text{Actual Sales} - \text{BEP Sales}}{\text{Actual Sales}}$$

= 60/180

= 0.3333

$$\text{OL} = \frac{\mathbf{1}}{\mathbf{0.33333}} = 3$$

OR

$$\text{OL} = \frac{\text{Contribution}}{\text{EBIT}}$$

= 67.50 / 22.50

OL = 3

FL $= \frac{EBIT}{EBT}$

$= 22.50 / 11.70$

FL $= 1.9231$

CL $= OL \times FL$

$= 3 \times 1.9231$

CL $= 5.7693$

(B) ROCE & EPS

EPS =₹ 5.85 (From Income statement above)

$$ROCE = \frac{EBIT}{\text{Capital Employed}}$$

$$= \frac{22.50}{240}$$

$= 9.375\%$

Capital Employed = Equity + Debt

= 150 + 90 = 240 lakhs

(C) Since ROCE = 9.375% < Interest = 12%, Kshitij Limited doesn't have a favorable financial leverage.

(D) Financial leverage measures the relationship for % change EPS due to changes in EBIT

$$FL = \frac{\%\text{ change in EPS}}{\%\text{ change in EBIT}}$$

$$1.9231 = \frac{\%\text{ change in EPS}}{15}$$

$= 28.8465\%$

Therefore, EPS will increase or decrease by 28.8465%, if EBIT increases or decreases by 15%

(E) Current PAT = 8.775 lakhs

3/4th of current PAT = 6.58125 lakhs

So, it means PAT decreases by 25%

Combined leverage measures the relationship for % change in PAT due to changes in sales

$$\text{CL} = \frac{\text{\% change in PAT}}{\text{\% change in Sales}}$$

$$5.7693 = \frac{25}{\text{\% change in Sales}}$$

% Change in Sales = 4.333%

New Sales level = 180 lakhs - 4.33%

New Sales level = ₹172.20 Lakhs

8. Calculation of the theoretical price (intrinsic price) denoted by 'Po' using Gordon's formula

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

So we need to calculate 3 variables i.e g, D1 & Ke

(A) g = Retention Ratio x ROI

$$\text{Retention ratio} = \frac{40 + 65 + 50 + 45 + 30}{5}$$

= 0.46

Scenario	ROI	Probability	Expected ROI
I	20%	0.30	20 x 0.3 = 6
II	15%	0.60	15 x 0.6 = 9
III	12%	0.50	12 x 0.5 = 6
			Expected ROI = 21%

Therefore g = 0.46 x 21 = 9.66%

(B) D1 = Do + g

Do = ₹ 3 per quarter x 4

= ₹ 12 (Annually)

Therefore D1 = 12 + 9.66%

= ₹ 13.16

(C) Ke will be calculated using CAPM Model and as per CAPM

Ke = Rf + (Rm – Rf) x Beta

= 4.5 + (12.5 – 4.5) x 1.3

= 14.9%

$$P_0 = \frac{13.16}{0.149 - 0.0966}$$

= ₹ 251.15

Calculation of the theoretical price (intrinsic price) denoted by 'Po' using Walter's formula

As per Walter $$P = \frac{D + \frac{r}{Ke}(E-D)}{K_e}$$

Where 'D' is constant, so no growth would be added

EPS = Dividend / (1 – Retention ratio)

= 12 / (1 – 0.46)

= ₹ 22.22

$$P = \frac{12 + \frac{0.21}{0.149}(22.22 - 12)}{0.149}$$

Po = ₹ 177.21

9. (A) Statement for estimation of Working Capital using Cash Cost Basis

Parshvam Limited

Particulars	**Amount (₹)**	**Amount (₹)**
(A) Current Assets		
1. Raw materials 15,90,000 x 1/12	1,32,500	
2. WIP		
~ RM 15,90,000 x 0.5 /12 x 90%	59,625	
~ Wages 6,00,000 x 0.5 /12 x 50%	12,500	
~ Manufacturing OH 23,40,000 x 0.5 /12 x 50%	48,750	
~ Other OH 74,472 x 0.5 /12 x 50%	1,552	
3. FG (on COGS) 46,04,472 x 1/12	3,83,706	
4. Debtors ~ Domestic 27,61,314 x 1.5/12 ~ Export 26,27,158 X 1/12 **WN - 5**	 3,45,164 2,18,930	
5. Cash/bank balance (given)	1,50,000	
6. Prepaid admin exp 3,60,000 x 2/12	60,000	
7. Income tax paid in advance (given)	25,000	
Gross working capital		**14,37,727**
(B) Current Liabilities		
1. Creditors ~ Domestic 9,00,000 x 2/12 ~ Import 6,00,000 x 3/12	 1,50,000 1,50,000	
2. Lag in wages payment 6,00,000 x 1/12	50,000	
3. Lag in manufacturing OH 23,40,000 x 0.5/12 Lag in other OH 74,472 x 0.5/12	 97,500 3,103	
4. Lag in S&D exp 3,00,000 x 1/12	25,000	
Excess of CA over CL		**9,62,124**
Add: **15% safety margin (9,87,124 x 15%)**		**1,44,319**
Net working capital		**11,06,443**

Notes –

(a) Working Capital is estimated on Cash Cost Basis

(b) Other Overheads are assumed to be the part of production.

(c) In absence of information on % completion for wages, manufacturing and other overheads, it is assumed to be 50% complete for the purpose of calculating WIP.

(d) Other Overheads are also assumed to be outstanding for a period of ½ month. In absence of specific information, it can also be assumed that nothing is outstanding or prepaid.

(B) If just the monetary aspects and factors are considered then, Parshvam limited should discontinue its operations at international level as the Cash Cost of sales for export at ₹ 26,27,158 is higher than the Export sales value which is just ₹ 24,80,000. In reality, non-monetary factors are also considered in decision making; exports will add a new customer base for the company. Furthermore, existence at international level brings on a high credibility and image to the company, etc.

WN 1 - Calculation of gross profit on Export Sales:

Let the domestic selling price be ₹100.

Therefore, Gross profit = ₹20, and cost per unit = ₹ 80

Now as given, Export price is 10% less than the domestic price = 100 – 10% = ₹ 90. However, the cost per unit to produce exported goods will remain at ₹ 80 only.

So gross profit on exports will be ₹ 90 - 80 = ₹ 10.

Therefore, Gross profit in % for Export Sales = 10 / 90 = 11.11%

	Domestic	**Export**	**Total**
Sales	30,00,000	24,80,000	54,80,000
Less: Gross Profit 20% for Domestic 11.11% for Export	(6,00,000)	(2,75,528)	(8,75,528)
COGS	24,00,000	22,04,472	46,04,472

Add: Admin Exp (To be Apportioned in the ratio of Sales)	1,97,080	1,62,920	3,60,000
Add: S&D Expense (To be Apportioned in the ratio of Sales)	1,64,234	1,35,766	3,00,000
Add: Bank Fees and charges for providing LOC services	-	1,24,000	1,24,000
Cash Cost of Sales	**27,61,314**	**26,27,158**	**53,88,472**

WN 2 - Preparation of Cost/Income Statement

Particulars	Amount (₹)
Raw Materials Domestic Import **WN - 3**	 9,00,000 6,90,000
Wages	6,00,000
Manufacturing Overheads (Cash) **WN - 4**	23,40,000
Other Overheads (Bal. Fig)	74,472
Cost of Production/Cost of Goods Sold	**46,04,472**
Add: Admin Exp	3,60,000
Add: S&D Exp	3,00,000
Add: Bank charges & Fees for L.O.C services	1,24,000
Cost of Sales	**53,88,472**

WN 3 – Calculation of Raw Materials Purchased - Imports

Purchase Price = ₹ 6,00,000

+ Custom Duty @ 20% = ₹ 1,20,000

(-) Upfront Duty Drawback @ 5% = ₹ (30,000)

Total Value of Raw materials = ₹ 6,90,000

WN 4 – Calculation of Cash Manufacturing Overheads

Manufacturing Overheads = ₹ 26,40,000

Less: Depreciation on Machinery

(24,00,000 x 10%)	= ₹ (2,40,000)
Less: Revenue Subsidy from EPC Board ***	
(24,00,000 x 2.5%)	= ₹ (60,000)
Cash Manufacturing Overheads	**= ₹ 23,40,000**

***Revenue subsidy shall not be capitalized but instead it will result in bringing down your manufacturing expenses which is revenue in nature. Had the it been the capital subsidy, then it would have reduced the purchase price of the machine and thereby changing the amount of depreciation.

WN 5 - Credit Period for Export customers

Since the company is availing benefit of Letter of Credit (L.O.C), the funds blocked in export customers would only be for 1 month and not 3 months; as the company would receive the entire Export Sales value in 1 month's time from the financial institution after paying the bank charges and fees.

10. (a) A firm's financial management may often have the following as their objectives:

(i) The maximisation of firm's profit.

(ii) The maximisation of firm's value / wealth.

The maximisation of profit is often considered as an implied objective of a firm. To achieve the aforesaid objective various type of financing decisions may be taken. Options resulting into maximisation of profit may be selected by the firm's decision makers. They even sometime may adopt policies yielding exorbitant profits in short run which may prove to be unhealthy for the growth, survival and overall interests of the firm. The profit of the firm in this case is measured in terms of its total accounting profit available to its shareholders.

The value/wealth of a firm is defined as the market price of the firm's stock. The market price of a firm's stock represents the focal judgment of all market participants as to what the value of the particular firm is. It takes into account present and prospective future earnings per share, the timing and risk of these earnings, the dividend policy of the firm and many other factors that bear upon the market price of the stock.

The value maximisation objective of a firm is superior to its profit maximisation objective due to following reasons.

1. The value maximisation objective of a firm considers all future cash flows, dividends, earning per share, risk of a decision etc. whereas profit maximisation objective does not consider the effect of EPS, dividend paid or any other returns to shareholders or the wealth of the shareholder.
2. A firm that wishes to maximise the shareholders wealth may pay regular dividends whereas a firm with the objective of profit maximisation may refrain from dividend payment to its shareholders.
3. Shareholders would prefer an increase in the firm's wealth against its generation of increasing flow of profits.
4. The market price of a share reflects the shareholders expected return, considering the long-term prospects of the firm, reflects the differences in timings of the returns, considers risk and recognizes the importance of distribution of returns.

The maximisation of a firm's value as reflected in the market price of a share is viewed as a proper goal of a firm. The profit maximisation can be considered as a part of the wealth maximisation strategy.

(b) Some common methods of venture capital financing are as follows:

(i) ***Equity financing:*** The venture capital undertakings generally require funds for a longer period but may not be able to provide returns to the investors during the initial stages. Therefore, the venture capital finance is generally provided by way of equity share capital. The equity contribution of venture capital firm does not exceed 49% of the total equity capital of venture capital undertakings so that the effective control and ownership remains with the entrepreneur.

(ii) ***Conditional loan:*** A conditional loan is repayable in the form of a royalty after the venture is able to generate sales. No interest is paid on such loans. In India venture capital financiers charge royalty ranging between 2 and 15 per cent; actual rate depends on other factors of the venture such as gestation period, cash flow patterns, risk and other factors of the enterprise. Some Venture capital financiers give a choice to the enterprise of paying a high rate of interest (which could be well above 20 per cent) instead of royalty on sales once it becomes commercially sound.

(iii) ***Income note:*** It is a hybrid security which combines the features of both conventional loan and conditional loan. The entrepreneur has to pay both interest and royalty on sales but at substantially low rates. IDBI's VCF provides funding equal to 80 – 87.50% of the projects cost for commercial application of indigenous technology.

(iv) ***Participating debenture:*** Such security carries charges in three phases — in the start-up phase no interest is charged, next stage a low rate of interest is charged up to a particular level of operation, after that, a high rate of interest is required to be paid.

6B: STRATEGIC MANAGEMENT

QUESTIONS

Multiple Choice Questions

1. DezineFabs is a fast-growing clothing brand in India. It started with a clear goal: to make stylish clothes affordable for everyone while also being mindful of the environment. The company strongly believes in three values – inclusivity, sustainability, and innovation in fashion.

   DezineFabs, a dynamic player in India's bustling clothing industry, offers a compelling example of how astute integration of core business principles can pave the path to triumph.

   DezineFabs was born with a clear vision: making stylish clothing accessible to every Indian, while minimizing their environmental impact through sustainability initiatives. Their guiding values include inclusivity, sustainability, and a forward-looking approach to fashion.

   In the beginning, DezineFabs emerged as a humble boutique offering affordable clothing. At that time, the clothing market was rapidly evolving, with consumers seeking affordable yet chic options. Recognizing these shifts in customer behavior, DezineFabs evolved its product range, embracing formal wear, active wear, and ethnic wear as the market matured.

   Their ability to comprehend customer styles was pivotal. DezineFabs conducted comprehensive market research to decode fashion trends and changing consumer preferences. This approach led to the creation of collections that resonated with their target audience. They also monitored social media and customer feedback channels, staying attuned to the evolving tastes and demands of their customers. Notably, they quickly responded to the growing demand for sustainable fashion by launching an eco-friendly clothing line.

To manage their diverse stakeholders effectively, DezineFabs tactfully classified their stakeholders. Fashion influencers and suppliers were nurtured through strategic partnerships, which not only elevated DezineFabs' brand image but also endowed them with access to cutting-edge fashion trends and premium materials.

Simultaneously, they maintained transparent and responsive communication with local communities and loyal customers. By actively addressing their concerns and soliciting feedback, DezineFabs upheld a positive reputation and nurtured customer loyalty.

DezineFabs' prowess laid in the ability of trend forecasting, efficient supply chain management, and robust vendor relationships. Their design team incessantly innovated to remain ahead of evolving fashion trends, allowing them to design collections that resonated deeply with their customer base. Their streamlined supply chain reduced lead times and operational costs, which translated into competitive pricing and the timely delivery of high-quality products. Strong vendor relationships provided them with a consistent supply of premium materials, further fortifying their core competences.

To fuel sustainable growth, DezineFabs executed a two-pronged approach encompassing market penetration and diversification. They embarked on a journey into tier 2 and 3 cities within India, capturing the attention of urban and semi-urban demographics. Simultaneously, they ventured into international markets, setting their sights on regions where Indian fashion was gaining traction.

Recognizing that growth necessitates change, DezineFabs cultivated a corporate culture that celebrated adaptability and innovation. Employees were not merely encouraged but were adequately empowered through specialized training programs, equipping them with the skills needed for seamless adaptation to new product launches and market expansions.

Vigilant strategic control mechanisms underpinned DezineFabs' growth trajectory, ensuring that their expansion remained harmonized with their values and overarching objectives. Routine performance assessments and evaluative protocols equipped the organization with real-time insights. These insights empowered informed decision-making, enabling DezineFabs to adjust their strategies deftly in response to ever-evolving market dynamics, shifting customer behavior, and emerging fashion trends.

DezineFabs' exceptional journey in India's clothing industry underscores the remarkable outcomes that can be realized through the seamless amalgamation of core business principles. In a world where the fashion landscape evolves ceaselessly, DezineFabs remains a beacon of affordability, sustainability, and accessibility, ensuring that fashion remains an inclusive pursuit for all.

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

(i) DezineFabs, an Indian clothing company, is deeply committed to a specific core value that underpins its business philosophy. This core value plays a pivotal role in guiding their actions and decisions. What is the central core value that defines DezineFabs' business philosophy?

- (a) Exclusivity, where they prioritize offering unique and rare clothing items.
- (b) Sustainability, reflecting their dedication to minimizing environmental impact.
- (c) Profit maximization, focusing primarily on financial gains.
- (d) International expansion, aiming to dominate global markets.

(ii) DezineFabs embarked on a strategic move to introduce specific product variants at a particular phase of the product life cycle. In which phase did DezineFabs introduce gluten-free and organic variants of their products?

- (a) Introduction phase, targeting early market entrants.
- (b) Growth phase, capitalizing on expanding market demand.
- (c) Maturity phase, aiming to maintain market share.
- (d) Decline phase, attempting to revive fading product sales.

(iii) DezineFabs showcased agility in adapting to evolving customer preferences. How did they respond to changing customer behavior, as highlighted in the given case?

(a) By increasing the prices of their products to enhance exclusivity.

(b) By introducing a sustainable clothing line in response to a growing demand for eco-friendly fashion.

(c) By ignoring customer feedback and focusing solely on their original product range.

(d) By reducing the variety of their products to simplify their offerings.

(iv) In accordance with Mendelow's Matrix, some stakeholder groups possess high power and high interest in a company's operations. Among the options listed below, which stakeholder group typically falls into the category of high power and high interest?

(a) Local communities with a vested interest in the company's impact on their neighborhoods.

(b) Fashion influencers, who can significantly affect brand perception and consumer choices.

(c) Loyal customers who consistently purchase the company's products.

(d) Low-power suppliers providing non-critical materials.

(v) The case highlights one of DezineFabs' core competences, which contributes significantly to their success in the clothing industry. What specific core competence is emphasized in the given case?

(a) Expertise in automobile manufacturing, unrelated to their clothing business.

(b) Expertise in designing luxury watches, a separate industry altogether.

(c) Expertise in trend forecasting, which plays a critical role in the fashion industry.

(d) Expertise in aerospace engineering, unrelated to their clothing business.

2. Innovexa Solutions Ltd. operates in the technology sector and has four divisions: Innovate, Develop, Transform, and Elevate. Each division functions as an independent product center while also contributing to the company's flagship product, TechSphere. Every division has its own set of activities, managed by a respective division head, who is responsible for the product line's performance and profitability. While competing in different market segments, each division leverages its own unique resources and capabilities to maintain a competitive edge. This type of organizational structure is known as:

   (a) Network structure

   (b) Divisional structure

   (c) Multi-divisional structure

   (d) Strategic Business Unit (SBU)

3. AeroGlide Inc., a global aviation company, approached Rajesh K, an Indian entrepreneur, to collaborate with his team on a next-generation aircraft manufacturing project. Their goal is to expand into South Asia, a region with a growing demand for advanced aviation technology. What strategy is AeroGlide Inc. trying to implement?

   (a) Market Penetration

   (b) Market Development

   (c) Strategic Alliance

   (d) Diversification

4. A sportswear brand, Athleon, is introducing a new range of eco-friendly performance shoes for fitness enthusiasts. The strategic manager wants to analyze the market position of competing brands in the sustainable sports footwear segment. Which tool can be used for this analysis?

   (a) SWOT Analysis

   (b) Strategic Group Mapping

   (c) BCG Matrix

(d) Value Chain Analysis

5. XYZ Logistics, a leading transportation company, has been operating in the industry for over a decade. Over the years, the company has expanded its fleet, optimized route planning, and implemented advanced fuel efficiency techniques. As a result, the company's per mile operating cost has significantly decreased due to improved efficiency and cumulative experience in managing large-scale logistics operations. Which strategic management concept best explains this reduction in operating costs?

   (a) Experience curve

   (b) Ansoff's growth matrix

   (c) Strategic surveillance

   (d) Value chain analysis

6. Global Fast Foods Ltd., a multinational restaurant chain, is evaluating whether to enter the packaged food industry by launching its own brand of frozen meals. This decision involves analyzing new markets, potential acquisitions, and overall business portfolio diversification. At what level is this decision likely to be made?

   (a) Business

   (b) Corporate

   (c) Functional

   (d) Operational

Descriptive Questions

Chapter 1-Introduction to Strategic Management

7. Ramesh Sharma has fifteen stores selling consumer durables in the Delhi Region. Four of these stores have been opened in the last three years. He believes in managing strategically and enjoyed significant sales of refrigerators, televisions, washing machines, air conditioners and like till four years back. With shift to the purchases to online stores, the sales of his stores came down to about seventy per cent in the last four years.

Analyse the position of Ramesh Sharma in light of limitations of strategic management.

8. Explain in brief the term 'objectives' as part of strategic intent. Also outline the characteristics, the objectives of a company must possess to be meaningful and to serve the intended role.

Chapter 2-Strategic Analysis: External Environment

9. Easy *Access* is a marketing services company providing consultancy to a range of business clients. *Easy Access* and its rivals have managed to persuade the Government to require all marketing services companies to complete a time-consuming and bureaucratic registration process and to comply with an industry code of conduct. Do you think that by doing this *Easy Access* and its rivals has an advantage in some ways to fight off competitors? Explain.

10. Yash is planning to launch his new tech start-up. He is exploring different locations across the country to establish his company in the right business environment. One option is the city of Bengaluru, the Silicon Valley of India, with an engaging network of entrepreneurs, investors, advisors and mentors. Coupled with various subsidies for new ventures and tax benefits, Bengaluru might be an ideal choice for Yash to establish his company and increase the chances of success.

    Define the term Business Environment with respect to the above scenario. Explain the different ways in which the interaction of a business with its environment can be helpful in developing a successful strategy.

Chapter 3-Strategic Analysis: Internal Environment

11. EliteWheels Ltd. is a luxury automobile manufacturer that caters to affluent customers seeking exclusivity and high-end features. The company offers premium vehicles with cutting-edge technology, showed customization options, and top-tier customer service. Unlike mass-market car brands, EliteWheels Ltd. charges a significant premium for its automobiles, ensuring that only a niche segment of customers can afford them. Additionally, the company invests heavily in advanced engineering and innovation to maintain its superior quality and brand prestige. Identify and explain the strategy adopted by EliteWheels Ltd.

12. Write short note on SWOT analysis.

Chapter 4-Strategic Choices

13. Jynklo Ltd. is an established online children gaming company in Japan. They are performing good in the gaming industry. The management of Jynklo Ltd. has decided to expand its business. They decided to start a premium sports drink named JynX for athletes. Identify and explain the growth strategy adopted by Jynklo Ltd.?

14. Write a short note on the role of ADL Matrix in assessing the competitive position of a firm.

Chapter 5-Strategy Implementation and Evaluation

15. EcoPure Ltd., a sustainable packaging manufacturer, faces challenges in goal alignment, resource allocation, and customer satisfaction. As a strategic consultant, analyze how strategic performance measures can address these issues. Propose a structured approach to implementation and explain how goal alignment, continuous improvement, and external accountability will drive long-term success and enhance stakeholder confidence.

16. Distinguish between Strategic Planning and Operational Planning.

SUGGESTED ANSWERS

MCQ No.	Answer	
1.	**(i)**	**(b)**
	(ii)	**(b)**
	(iii)	**(b)**
	(iv)	**(b)**
	(v)	**(c)**
2.		**(d)**
3.		**(c)**

4.		**(b)**
5.		**(a)**
6.		**(b)**

7. Ramesh Sharma is facing declining sales on account of the large-scale shift of customers to online stores. While he is using the tools of strategic management, they cannot counter all hindrances and always achieve success. There are limitations attached to strategic management as follows:

- The environment under which strategies are made is highly complex and turbulent. Entry of online stores, a new kind of competitor brought a different dimension to selling consumer durables. Online stores with their size power could control the market and offer stiff competition to traditional stores.
- Another limitation of strategic management is that it is difficult to predict how things will shape-up in future. Ramesh Sharma, although managing strategically failed to see how online stores will impact the sales.
- Although strategic management is a time-consuming process, he should continue to manage strategically. The challenging times require more effort on his part.
- Strategic management is costly. Ramesh Sharma may consider engaging experts to find out preferences of the customers and attune his strategies to better serve them in a customized manner. Such customized offerings may be difficult to match by the online stores.
- The stores owned by Ramesh Sharma are much smaller than online stores. It is very difficult for him to visualize how online stores will be moving strategically.

8. Objectives are an **organization's performance targets** – the results and outcomes it wants to achieve. They **function as yardsticks** for tracking an organization's performance and progress. Objectives with strategic focus relate to outcomes that strengthen an organization's overall business position and competitive vitality.

Objectives, to be meaningful to serve the intended role, must possess the following characteristics:

- Objectives should define the organisation's relationship with its environment.
- They should be facilitated towards the achievement of mission and purpose.
- They should provide the basis for strategic decision-making.
- They should provide standards for performance appraisal.
- They should be concrete and specific.
- They should be related to a time frame.
- They should be measurable and controllable.
- They should be challenging.
- Different objectives should correlate with each other.
- Objectives should be set within the constraints of organisational resources and the external environment.

9. Yes, *Easy Access* and its rivals get advantage from this move. The new bureaucratic process is making it more complicated for organizations to start up and enter the *Easy Access* market, increasing barriers to entry and thereby reducing the threat of new entrants. New entrants can reduce an industry's profitability, because they add new production capacity, leading to increase in supply of the product, sometimes even at a lower price and can substantially erode existing firm's market share position. However, New entrants are always a powerful source of competition. The new capacity and product range they bring in throws up a new competitive pressure. The bigger the new entrant, the more severe the competitive effect. New entrants also place a limit on prices and affect the profitability of existing players, which is known as Price War.

10. Business Environment refers to all external factors, influences, or situations that affect business decisions, plans, and operations. In Yash's case, these factors include the dynamic and evolving conditions in Bengaluru, which impact the strategic decisions for his tech start-up.

Benefits of Interaction with the Business Environment

- **Determine Opportunities and Threats:** Interaction with the environment helps Yash identify new consumer needs, emerging trends, and potential market opportunities. This insight can guide the development of innovative products and services that meet market demands. Understanding changes in laws, social behaviors, and competitor actions enables Yash to anticipate and mitigate potential threats, ensuring the start-up remains resilient and adaptive.
- **Give Direction for Growth:** By analyzing the external environment, Yash can pinpoint areas for expansion and growth. Recognizing market trends and technological advancements allows him to strategize effectively, ensuring the start-up scales successfully. Awareness of the changes around the business environment facilitates better planning and strategic decisions, aligning the start-up's goals with the market dynamics.
- **Continuous Learning:** Continuous interaction with the environment motivates Yash and his team to update their knowledge, understanding, and skills. Staying informed about industry trends and advancements ensures the start-up remains competitive. This ongoing learning process enhances the start-up's ability to adapt to changes, promoting innovation and responsiveness to market shifts.
- **Image Building:** Understanding and responding to environmental needs help the start-up build a positive image. For instance, adopting sustainable practices or contributing to local initiatives can enhance the company's reputation. Demonstrating sensitivity to the business environment shows that the start-up is responsible and community-focused, attracting customers and partners who value corporate social responsibility.
- **Meeting Competition:** Interaction with the environment allows Yash to analyze competitors' strategies and adapt accordingly. Understanding competitors' strengths and weaknesses helps in crafting strategies that provide a competitive edge. By leveraging insights from the environment, the start-up can position itself

uniquely in the market, differentiating its offerings from those of competitors.

11. According to Michael Porter, competitive advantage can be derived from three generic strategies: cost leadership, differentiation, and focus.

EliteWheels Ltd. targets a niche market segment by offering unique and high-value automobiles tailored to the needs of affluent consumers. While the company manages its costs efficiently, it does not compromise on the quality or exclusivity of its products. By maintaining superior craftsmanship, advanced technology, and high personalization levels, the brand commands a premium price for its vehicles. Thus, the strategy adopted by EliteWheels Ltd. is **Focused Differentiation**.

A focused differentiation strategy involves offering distinctive features that cater to a specific market segment. Companies employing this strategy may target a specific customer demographic, geographic region, or sales channel. Firms that compete based on uniqueness and focus on a specialized market segment follow a Focused Differentiation Strategy.

12. SWOT analysis is a tool used by organizations for evolving strategic options for the future. The term SWOT refers to the analysis of strengths, weaknesses, opportunities and threats facing a company. Strengths and weaknesses are identified in the internal environment, whereas opportunities and threats are located in the external environment.

(a) **Strength:** Strength is an inherent capability of the organization which it can use to gain strategic advantage over its competitor.

(b) **Weakness:** A weakness is an inherent limitation or constraint of the organisation which creates strategic disadvantage to it.

(c) **Opportunity:** An opportunity is a favourable condition in the external environment which enables it to strengthen its position.

(d) **Threat:** An unfavourable condition in the external environment which causes a risk for, or damage to the organisation's position.

The major purpose of SWOT analysis is to enable the management to create a firm-specific business model that will best align, fit or match organisational resources and capabilities to the demands of the environment in which it operates.

13. Currently Jynklo Ltd. is performing in the children's gaming industry. But now its management has decided to expand their business by starting a premium sports drink named JynX for athletes. As there are no links to both products with respect to customer groups, customer functions, or the technologies being used, Jynklo Ltd. have opted **Conglomerate diversification**.

Jynklo Ltd. diversifies in a business that is not related to their existing line of products and can be termed as conglomerate diversification. In conglomerate diversification, the new businesses/ products are disjointed from the existing businesses/products in every way; it is an unrelated diversification. In process/ technology/ function, there is no connection between the new products and the existing ones. Conglomerate diversification has no common threat at all with the firm's present position.

14. The ADL matrix has derived its name from Arthur D. Little which is a portfolio analysis method based on product life cycle. The approach forms a two-dimensional matrix based on stage of industry maturity and the firm's competitive position, environmental assessment and business strength assessment. The role of ADL matrix is to assess the competitive position of a firm based on an assessment of the following criteria:

- **Dominant:** This is a comparatively rare position and in many cases is attributable either to a monopoly or a strong and protected technological leadership.
- **Strong:** By virtue of this position, the firm has a considerable degree of freedom over its choice of strategies and is often able to act without its market position being unduly threatened by its competitors.
- **Favourable:** This position, which generally comes about when the industry is fragmented and no one competitor stand out clearly, results in the market leaders a reasonable degree of freedom.
- **Tenable:** Although the firms within this category are able to perform satisfactorily and can justify staying in the industry, they

are generally vulnerable in the face of increased competition from stronger and more proactive companies in the market.

- **Weak:** The performance of firms in this category is generally unsatisfactory although the opportunities for improvement do exist.

15. Strategic performance measures are critical for EcoPure Ltd. as they provide a structured approach to addressing the company's challenges. By implementing these measures, EcoPure Ltd. can enhance efficiency, optimize resources, and improve stakeholder confidence.

- **Goal Alignment** ensures that all departments work towards EcoPure Ltd.'s sustainability and customer satisfaction objectives. By setting clear goals, the company can ensure consistency in decision-making and strategic execution.
- **Resource Allocation** helps the company make informed investment decisions, prioritizing areas like production efficiency, innovation, and supply chain improvements. This enables EcoPure Ltd. to optimize resources while maintaining high-quality standards.
- **Continuous Improvement** allows the company to track key performance indicators such as delivery timelines, product quality, and operational efficiency. Regular analysis and refinements in processes will help the company enhance performance over time.
- **External Accountability** builds trust with stakeholders, including investors, customers, and regulatory bodies. By maintaining transparency in reporting and demonstrating commitment to sustainability, EcoPure Ltd. can strengthen its market reputation.

By leveraging strategic performance measures in these areas, EcoPure Ltd. can overcome its challenges, enhance customer satisfaction, and drive long-term success.

16.

Strategic planning	Operational planning
Strategic planning shapes the organisation and its resources.	Operational planning deals with current deployment of resources.
Strategic planning assesses the impact of environmental variables.	Operational planning develops tactics rather than strategy.
Strategic planning takes a holistic view of the organisation.	Operational planning projects current operations into the future.
Strategic planning develops overall objectives and strategies.	Operational planning makes modifications to the business functions but not fundamental changes.
Strategic planning is concerned with the long-term success of the organisation.	Operational planning is concerned with the short-term success of the organisation.
Strategic planning is a senior management responsibility.	Operational planning is the responsibility of functional managers.