

INTERMEDIATE COURSE

GROUP – II

REVISION TEST PAPERS

MAY, 2024



BOARD OF STUDIES

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

(Set up by an Act of Parliament)

New Delhi

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REVISION TEST PAPER, MAY, 2024 – OBJECTIVE & APPROACH

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

I. Objective of Revision Test Paper

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

The primary objectives of the RTP are:

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

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

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

Live Learning Classes by renowned subject experts conducted free of charge in virtual mode 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 13 questions: Division A (Case scenario based MCQs) which contains 3 case scenarios and Division B (Descriptive questions) which contains 10 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.	Material Cost	Calculation of EOQ.
2.	Employee cost	Calculation of profit foregone due to labour Turnover.
3.	Overheads	Distribution and re-distribution of overheads.
Division B		
4.	Activity Based Costing (ABC) Method	Calculation of operating income using ABC costing.
5.	Cost Sheet	Preparation of Statement of Cost.
6.	Cost Accounting System	Preparation of Reconciliation.
7.	Job and Batch Costing	Compute the profit/loss per batch and EBQ.
8.	Process Costing	Preparation of Statement of equivalent production, cost per unit and cost of units transferred.
9.	Service Costing	Calculation of operating cost of vehicle.
10.	Standard Costing	Calculation of Material variances.
11.	Marginal Costing	Calculation Break-even sales, profit and margin of safety.
12.	Budget and Budgetary Control	Preparation of Revenue budget.
13(a)	Cost Accounting Systems	Reconciliation of cost accounts and financial accounts necessary in case of integrated accounting system.

13(b)	Introduction to Cost and Management Accounting	Information Technology in Cost Accounting.
13(c)	Introduction to Cost and Management Accounting	Controllable & uncontrollable costs.
13(d)	Joint product and By product	Apportionment of joint costs.

PAPER – 5: AUDITING AND ETHICS

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.

The Revisionary Test Paper (RTP) of Auditing and Ethics for May, 2024 carries twenty five descriptive questions along with Case Scenarios followed by MCQs and standalone MCQs along with their answers. These questions have been taken from the entire syllabus which is divided into eleven chapters discussed in the study material.

The various Chapters are 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 also 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 9 questions: Division A (Case scenario based MCQs) which contains 1 case scenario and Division B (Descriptive

questions) which contains 8 questions for full coverage of the syllabus. Theoretical questions along with computational problems have also been incorporated so that you are able to give emphasis to the theoretical portion of the syllabus as well. Since this paper's inclination is more towards numerical-oriented questions which involve mathematical calculations, therefore, it is very important that you have thoroughly studied the theoretical aspects of the subject and are also clear about the concepts and logic behind the mathematical workings and formulae.

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

Q. No.	Topic	About the Problem
	Division A	
1.	Working Capital	Financing of working capital.
	Division B	
1.	Ratio Analysis	Preparation of Balance sheet and Income statement.
2.	Cost of Capital	Calculation of after-tax cost of funds, marginal cost of capital.
3.	Capital Structure	Calculation of earning of investor in levered and unlevered company.
4.	Leverage	Preparation of Income statement.
5.	Investment Decision	Analysis for replacement of old machine and calculation of IRR.
6.	Dividend Decision	Calculation of value of company under MM hypothesis.
7.	Working Capital	Preparation of statement of profit & loss and working capital requirement on cash cost basis.

8 (i).	Scope and Objectives of Financial Management	Wealth maximisation v/s Profit maximisation.
8 (ii).	Types of Financing	Importance and cost of different source of finance.

Section – B: Strategic Management

The Revision Test Paper on the subject of Strategic Management for the May 2024 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

Division A: Case Scenario

Material Cost

1. The purchase committee of A Ltd. has been entrusted to review the material procurement policy of the company. The chief marketing manager has appraised the committee that the company at present produces a single product X by using two raw materials A and B in the ratio of 3:2. Material A is perishable in nature and has to be used within 10 days from Goods received note (GRN) date otherwise material becomes obsolete. Material B is durable in nature and can be used even after one year. Material A is purchased from the local market within 1 to 2 days of placing order. Material B, on the other hand, is purchased from neighbouring state and it takes 2 to 4 days to receive the material in the store.

The purchase price of per kilogram of raw material A and B is ₹30 and ₹44 respectively exclusive of taxes. To place an order, the company has to incur an administrative cost of ₹1,200. Carrying cost for Material A and B is 15% and 5% respectively. At present material A is purchased in a lot of 15,000 kg. to avail 10% discount on market price. GST applicable for both the materials is 18% and the input tax credit is availed.

The sales department has provided an estimate that the company could sell 30,000 kg. in January 2024 and also projected the same trend for the entire year.

The ratio of input and output is 5:3. Company works for 25 days in a month and production is carried out evenly.

The following queries/ calculations to be kept ready for purchase committees' reference:

- (i) For the month of January 2024, what would be the quantity of the materials to be requisitioned for both material A and B:
 - (a) 9,000 kg & 6,000 kg respectively
 - (b) 18,000 kg & 12,000 kg respectively
 - (c) 27,000 kg & 18,000 kg respectively
 - (d) 30,000 kg & 20,000 kg respectively.
- (ii) The economic order quantity (EOQ) for both the material A & B:
 - (a) 13,856 kg & 16,181 kg respectively
 - (b) 16,197 kg & 17,327 kg respectively
 - (c) 16,181 kg & 17,165 kg respectively
 - (d) 13,197 kg & 17,165 kg respectively
- (iii) What would the maximum stock level for material A:
 - (a) 18,200 kg.
 - (b) 12,000 kg.
 - (c) 16,000 kg.
 - (d) 16,200 kg.
- (iv) Calculate saving/ loss in purchase of Material A if the purchase order quantity is equal to EOQ.
 - (a) Profit of Rs. 3,21,201.
 - (b) Loss of Rs. 3,21,201.
 - (c) Profit of Rs. 2,52,500.
 - (d) Loss of Rs. 2,52,500.

- (v) What would the minimum stock level for material A:
- (a) 1,800 kg.
 - (b) 1,200 kg.
 - (c) 600 kg.
 - (d) 2,400 kg.

Employee Cost

2. The board of the J Ltd. has been appraised by the General Manager (HR) that the employee attrition rate in the company has increased. The following facts has been presented by the GM(HR):
- (1) Training period of the new recruits is 50,000 hours. During this period their productivity is 60% of the experienced workers. Time required by an experienced worker is 10 hours per unit.
 - (2) 20% of the output during training period was defective. Cost of rectification of a defective unit was ₹ 25.
 - (3) Potential productive hours lost due to delay in recruitment were 1,00,000 hours.
 - (4) Selling price per unit is ₹ 180 and P/V ratio is 20%.
 - (5) Settlement cost of the workers leaving the organization was ₹ 1,83,480.
 - (6) Recruitment cost was ₹ 1,56,340
 - (7) Training cost was ₹ 1,13,180

You being an associate finance to GM(HR), has been asked the following questions:

- (i) How much quantity of output is lost due to labour turnover?
- (a) 10,000 units
 - (b) 8,000 units
 - (c) 12,000 units
 - (d) 12,600 units

- (ii) How much loss in the form of contribution, the company incurred due to labour turnover?
 - (a) ₹ 4,32,000
 - (b) ₹ 4,20,000
 - (c) ₹ 4,36,000
 - (d) ₹ 4,28,000
- (iii) What is the cost repairing of defective units?
 - (a) ₹ 75,000
 - (b) ₹ 15,000
 - (c) ₹ 50,000
 - (d) ₹ 25,000
- (iv) Calculate the profit lost by the company due to increased labour turnover.
 - (a) ₹ 7,50,000
 - (b) ₹ 15,00,000
 - (c) ₹ 5,00,000
 - (d) ₹ 9,00,000
- (v) How much quantity of output is lost due to inexperience of the new worker?
 - (a) 1,000 units
 - (b) 2,600 units
 - (c) 2,000 units
 - (d) 12,600 units

Overheads: Absorption Costing Method

3. During half year ending inter departmental review meeting of P Ltd., cost variance report was discussed and the performance of the departments were assessed. The following figures were presented.

For a period of first six months of the financial year, following information were extracted from the books:

Actual production overheads ₹ 34,08,000

The above amount is inclusive of the following payments made:

Paid as per court's order	₹ 4,50,000
Expenses of previous year booked in current year	₹ 1,00,000
Paid to workers for strike period under an award	₹ 4,20,000
Obsolete stores written off	₹ 36,000

Production and sales data for the six months are as under:

Production:

Finished goods	1,10,000 units
Works-in-progress (50% complete in every respect)	80,000 units

Sale:

Finished goods	90,000 units
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Machine worked during the period was 3,000 hours.

At the of preparation of revenue budget, it was estimated that a total of ₹ 50,40,000 would be required for budgeted machine hours of 6,000 as production overheads for the entire year.

During the meeting, a data analytic report revealed that 40% of the over/under-absorption was due to defective production policies and the balance was attributable to increase in costs.

You were also present at the meeting; the chairperson of the meeting has asked you to be ready with the followings for the performance appraisal of the departmental heads:

- (i) How much was the budgeted machine hour rate used to recover overhead?
 - (a) ₹ 760
 - (b) ₹ 820

- (c) ₹ 780
- (d) ₹ 840
- (ii) How much amount of production overhead has been recovered (absorbed) upto the end of half year end?
 - (a) ₹ 25,20,000
 - (b) ₹ 34,08,000
 - (c) ₹ 24,00,000
 - (d) ₹ 24,60,000
- (iii) What is the amount of overhead under/ over absorbed?
 - (a) 1,18,000 over-absorbed
 - (b) 1,18,000 under- absorbed
 - (c) 18,000 over-absorbed
 - (d) 18,000 under-absorbed
- (iv) What is the supplementary rate for apportionment of over/under absorbed overheads over WIP, Finished goods and Cost of sales?
 - (a) ₹ 0.315 per unit
 - (b) ₹ 0.472 per unit
 - (c) ₹ 0.787 per unit
 - (d) ₹ 1 per unit
- (v) What is the amount of over/under absorbed overhead apportioned to Work in Progress?
 - (a) ₹ 9,440
 - (b) ₹ 42,480
 - (c) ₹ 18,880
 - (d) ₹ 70,800

Division B: Descriptive Questions

Activity Based Costing

4. The sales department of A Limited is analysing the customer profitability for its Product Z. It has decided to analyse the profitability of its five new customers using activity-based costing method. It buys Product Z at ₹ 5,400 per unit and sells to retail customers at a listed price of ₹ 6,480 per unit. The data pertaining to five customers are:

	Customers				
	A	B	C	D	E
Units sold	4,500	6,000	9,500	7,500	12,750
Listed Selling Price	₹6,480	₹6,480	₹6,480	₹6,480	₹6,480
Actual Selling Price	₹6,480	₹6,372	₹5,940	₹6,264	₹5,832
Number of Purchase orders	15	25	30	25	30
Number of Customer visits	2	3	6	2	3
Number of deliveries	10	30	60	40	20
Kilometers travelled per delivery	20	6	5	10	30
Number of expedited deliveries	0	0	0	0	1

After a detailed analysis and computation, the following activities has been identified and respective cost has been calculated:

Activity	Cost Driver Rate
Order taking	₹4,500 per purchase order
Customer visits	₹ 3,600 per customer visit
Deliveries	₹ 7.50 per delivery Km travelled
Product handling	₹ 22.50 per case sold
Expedited deliveries	₹ 13,500 per expedited delivery

You are required to COMPUTE the customer-level operating income of each of five retail customers.

Cost Sheet

5. P Ltd. has gathered cost information from ledgers and other sources for the year ended 31st December 2023. The information are tabulated below:

Sl. No.		Amount (₹)	Amount (₹)
(i)	Raw materials purchased		5,00,00,000
(ii)	Freight inward		9,20,600
(iii)	Wages paid to factory workers		25,20,000
(iv)	Royalty paid for production		1,80,000
(v)	Amount paid for power & fuel		3,50,000
(vi)	Job charges paid to job workers		3,10,000
(vii)	Stores and spares consumed		1,10,000
(viii)	Depreciation on office building		50,000
(ix)	Repairs & Maintenance paid for:		
	- Plant & Machinery	40,000	
	- Sales office building	20,000	60,000
(x)	Insurance premium paid for:		
	- Plant & Machinery	28,200	
	- Factory building	18,800	47,000
(xi)	Expenses paid for quality control check activities		18,000
(xii)	Research & development cost paid for improvement in production process		20,000
(xiii)	Expenses paid for pollution control and engineering & maintenance		36,000
(xiv)	Salary paid to Sales & Marketing managers		5,60,000
(xv)	Salary paid to General Manager		6,40,000
(xvi)	Packing cost paid for:		

	- Primary packing necessary to maintain quality	46,000	
	- For re-distribution of finished goods	80,000	1,26,000
(xvii)	Fee paid to independent directors		1,20,000
(xviii)	Performance bonus paid to sales staffs		1,20,000
(xix)	Value of stock as on 1 st January, 2023:		
	- Raw materials	10,00,000	
	- Work-in-process	8,60,000	
	- Finished goods	12,00,000	30,60,000
(xx)	Value of stock as on 31 st December, 2023:		
	- Raw materials	8,40,000	
	- Work-in-process	6,60,000	
	- Finished goods	10,50,000	25,50,000

Amount realized by selling of scrap and waste generated during manufacturing process – ₹ 48,000/-

The board meeting is scheduled to be held in next week and you being an associate to the chief cost controller of the company, has been asked to PREPARE a cost sheet.

Cost Accounting System

6. The financial books of a company reveal the following data for the year ended 31st March, 2023:

	(₹)
Opening Stock:	
Finished goods 875 units	76,525
Work-in-process	33,000
01.04.2022 to 31.03.2023	
Raw materials consumed	7,84,000
Direct labour	4,65,000

Factory overheads	2,65,000
Goodwill written off	95,000
Administration overheads	3,15,000
Income tax paid	72,000
Bad debts	21,000
Selling and distribution overheads	65,000
Interest received	18,500
Rent received	72,000
Sales 14,500 units	20,80,000
Closing Stock: Finished goods 375 units	43,250
Work-in-process	48,200

The management of the company, for preparing cost sheet and variance analysis uses the following cost recovery basis which has been elaborated by the cost controller of the company:

Factory overheads are absorbed at 60% of direct wages.

Administration overheads (production related) are recovered at 20% of factory cost.

Selling and distribution overheads are charged at ₹ 5 per unit sold.

Opening Stock of finished goods is valued at ₹105 per unit.

The company values work-in-process at factory cost for both financial and cost accounting purpose.

You being an associate to the cost controller of the company has been asked to:

- (i) PREPARE a statement of profit as per costing records and financial records.
- (ii) CALCULATE cost of production per unit.
- (iii) PREPARE a statement reconciling the profit as per costing records with the profit as per financial records.

Batch Costing

7. Arnav Ltd. operates in beverages industry where it manufactures soft-drink in three sizes of Large (3 litres), Medium (1.5 litres) and Small (600 ml) bottles. The products are processed in batches. The 5,000 litres capacity processing plant consumes electricity of 90 Kilowatts per hour and a batch takes 1 hour 45 minutes to complete. Only symmetric size of products can be processed at a time. The machine set-up takes 15 minutes to get ready for next batch processing. During the set-up power consumption is only 20%.
- (i) The current price of Large, Medium and Small are ₹ 150, ₹ 90 and ₹ 50 respectively.
 - (ii) To produce a litre of beverage, 14 litres of raw material-W and 25 ml of Material-C are required which costs ₹ 0.50 and ₹ 1,000 per litre respectively.
 - (iii) 20 direct workers are required. The workers are paid ₹ 880 for 8 hours shift of work.
 - (iv) The average packing cost per bottle is ₹ 3
 - (v) Power cost is ₹ 7 per Kilowatt -hour (Kwh)
 - (vi) Other variable cost is ₹ 30,000 per batch.
 - (vii) Fixed cost (Administration and marketing) is ₹ 4,90,00,000.
 - (viii) The holding cost is ₹ 1 per bottle per annum.

The marketing team has surveyed the following demand (bottle) of the product:

Large	Medium	Small
3,00,000	7,50,000	20,00,000

You are required to CALCULATE profit/ loss per batch and also COMPUTE Economic Batch Quantity (EBQ).

Process Costing

8. The following data are available in respect of Process-I for January 2024:

(1) Opening stock of work in process: 600 units at a total cost of ₹ 4,200.

(2) Degree of completion of opening work in process:

Material	100%
Labour	60%
Overheads	60%

(3) Input of materials at a total cost of ₹ 55,200 for 9,200 units.

(4) Direct wages incurred ₹ 18,600

(5) Overheads ₹ 8,630.

(6) Units scrapped 200 units. The stage of completion of these units was:

Materials	100%
Labour	80%
Overheads	80%

(7) Closing work in process; 700 units. The stage of completion of these units was:

Material	100%
Labour	70%
Overheads	70%

(8) 8,900 units were completed and transferred to the next process.

(9) Normal loss is 4% of the total input (opening stock plus units put in)

(10) Scrap value is ₹ 6 per unit.

You are required to:

(i) PREPARE using FIFO method, Statement of equivalent production,

- (ii) PREPARE Statement of cost,
- (iii) CALCULATE cost of closing WIP,
- (iv) CALCULATE the cost of the units to be transferred to the next process.

Service Costing

9. A LMV Pvt. Ltd, operates cab/ car rental service in Delhi/NCR. It provides its service to the offices of Noida, Gurugram and Faridabad. At present it operates CNG fuelled cars but it is also considering to upgrade these into Electric vehicle (EV). The following details related with the owning of CNG & EV propelled cars are as tabulated below:

Particulars	CNG Car	EV Car
Car purchase price (₹)	9,20,000	15,20,000
Govt. subsidy on purchase of car (₹)	--	1,50,000
Life of the car	15 years	10 years
Residual value (₹)	95,000	1,70,000
Mileage	20 km/kg	240 km per charge
Electricity consumption per full charge	--	30 Kwh
CNG cost per Kg (₹)	60	--
Power cost per Kwh (₹)	--	7.60
Annual Maintenance cost (₹)	8,000	5,200
Annual insurance cost (₹)	7,600	14,600
Tyre replacement cost in every 5 - year (₹)	16,000	16,000
Battery replacement cost in every 8- year (₹)	12,000	5,40,000

Apart from the above, the following are the additional information:

Particulars	
Average distance covered by a car in a month	1,500 km

Driver's salary (₹)	20,000 p.m
Garage rent per car (₹)	4,500 p.m
Share of Office & Administration cost per car (₹)	1,500 p.m

You have been approached by the management of A LMV Pvt. Ltd. for consultation on the two options of operating the cab service.

CALCULATE the operating cost of vehicle per month per car for both CNG & EV options.

Standard Costing

10. EML operates in coal mining through open cast mining method. Explosives and detonators are used for excavation of coal from the mines. The following are the details of standard quantity of explosives materials used for mining:

Particulars	Rate (₹)	Standard Qty. for Iron ore	Standard Qty. for Overburden (OB)
SME	40.00 per kg.	2.4 kg per tonne	1.9 kg per cubic-meter
Detonators	20.00 per piece	2 pcs per tonne	2 pcs per cubic- meter

The standard stripping ratio is 3:1 (means 3 cubic- meter of overburden soil to be removed to get one tonne of coal).

During the month of December 2023, the company produces 20,000 tonnes of coal and 58,000 cubic- meter of OB. The quantity of explosive materials used and paid for the month is as below:

Material	Quantity	Amount (₹)
SME	1,67,200 kg.	63,53,600
Detonators	1,18,400 pcs	24,27,200

Explosive suppliers are paid for the explosive materials on the basis of performance of the explosives which is termed as powder factor. One of the suppliers has presented their bill for explosive supplied for the month of December 2023. You being a bill passing officer of EML is required to COMPUTE the material price variance, material quantity variance and material cost variance.

Marginal Costing

11. The analysis of cost sheet of A Ltd. for the last financial year has revealed the following information for its product R:

Elements of Cost	Variable Cost portion	Fixed Cost
Direct Material	30% of cost of goods sold	--
Direct Labour	15% of cost of goods sold	--
Factory Overhead	10% of cost of goods sold	₹ 2,30,000
General & Administration Overhead	2% of cost of goods sold	₹ 71,000
Selling & Distribution Overhead	4% of cost of sales	₹ 68,000

Last year 5,000 units were sold at ₹185 per unit.

You being an associate to cost controller of the A Ltd., CALCULATE :

- Break-even Sales (in rupees),
- Profit earned during last year,
- Margin of safety (in %) and
- the profit if the sales were 10% less than the actual sales.

Budget and Budgetary Control

12. M Ltd. is a public sector undertaking (PSU), produces a product A. The company is in process of preparing its revenue budget for the year 2024. The company has the following information which can be useful in preparing the budget:
- It has anticipated 12% growth in sales volume from the year 2023 of 4,20,000 tonnes.
 - The sales price of ₹ 23,000 per tonne will be increased by 10% provided Wholesale Price Index (WPI) increases by 5%.
 - To produce one tonne of product A, 2.3 tonnes of raw material are required. The raw material cost is ₹ 4,500 per tonne. The price of raw material will also increase by 10% if WPI increase by 5%.
 - The projected increase in WPI for 2024 is 4%

- (v) A total of 6,000 employees works for the company. The company works 26 days in a month.
- (vi) 85% of employees of the company are permanent and getting salary as per 5- year wage agreement. The earnings per manshift (means an employee cost for a shift of 8 hours) is ₹ 3,000 (excluding terminal benefits). The new wage agreement will be implemented from 1st July 2024 and it is expected that a 15% increase in pay will be given.
- (vii) The casual employees are getting a daily wage of ₹ 850. The wages in linked to Consumer Price Index (CPI). The present CPI is 165.17 points and it is expected to be 173.59 points in year 2024.
- (viii) Power cost for the year 2023 is ₹ 42,00,000 for 7,00,000 units (1 unit = 1 Kwh). 60% of power is used for production purpose (directly related to production volume) and remaining are for employee quarters and administrative offices.
- (ix) During the year 2023, the company has paid ₹ 60,00,000 for safety and maintenance works. The amount will increase in proportion to the volume of production.
- (x) During the year 2023, the company has paid ₹ 1,20,000 for the purchase of diesel to be used in car hired for administrative purposes. The cost of diesel will increase by 15% in year 2024.
- (xi) During the year 2023, the company has paid ₹ 6,00,000 for car hire charges (excluding fuel cost). In year 2024, the company has decided to reimburse the diesel cost to the car rental company. Doing this will attract 5% GST on Reverse Charge Mechanism (RCM) basis on which the company will not get GST input credit.
- (xii) Depreciation on fixed assets for the year 2023 is ₹ 80,40,00,000 and it will be 15% lower in 2024.

You being an associate to the budget controller of the company, PREPARE Revenue (Flexible) budget for the year 2024 and also show the budgeted profit/ loss for the year.

Miscellaneous

13. (a) "Is reconciliation of cost accounts and financial accounts necessary in case of integrated accounting system?" explain.
- (b) Discuss the impact of Information Technology in Cost Accounting.
- (c) Explain the difference between controllable & uncontrollable costs?
- (d) 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.



SUGGESTED ANSWERS/HINTS

1. (i) (d) Monthly Production of X = 30,000 kgs.

$$\text{Raw Material Required} = \frac{30,000}{3} \times 5 = 50,000 \text{ kgs.}$$

$$\text{Material A} = \frac{50,000}{5} \times 3 = \mathbf{30,000 \text{ kg.}}$$

$$\text{Material B} = \frac{50,000}{5} \times 2 = \mathbf{20,000 \text{ kg.}}$$

- (ii) (a) Calculation of Economic Order Quantity (EOQ):

$$\text{Material A} = \sqrt{\frac{2 \times \text{Annual consumption} \times \text{Order cost}}{\text{Carrying cost per unit p.a.}}}$$

$$= \sqrt{\frac{2 \times (30,000 \times 12) \times 1,200}{15\% \text{ of } 30}} = \mathbf{13,856 \text{ kg.}}$$

$$\text{Material B} = \sqrt{\frac{2 \times (20,000 \times 12) \times 1,200}{5\% \text{ of } 44}} = \mathbf{16,181 \text{ kg.}}$$

- (iii) (b) Calculation of Maximum Stock level: Since, the Material A is perishable in nature and it required to be used within 10 days, hence, the Maximum Stock Level shall be lower of two:

- (a) Stock equal to 10 days consumption

$$= \frac{30000}{25} \times 10 \text{ days} = 12,000 \text{ kg.}$$

(b) Maximum Stock Level for Material A:

Re-order Quantity + Re-order level – (Min consumption* × Min. lead time)

Where, Re-order Quantity = 15,000 kg.

Re-order level = Max. Consumption* × Max. Lead time
= 30,000/25 × 2 days = 2,400 kg.

Maximum stock Level = 15,000 kg. + 2,400 kg. -
(30,000/25 × 1 day)
= 17,400 – 1,200 = 16,200 kg.

Stock required for 10 days consumption is lower than the maximum stock level calculated through the formula. Therefore, Maximum Stock Level will be **12,000 kg.**

(*Since, production is processed evenly throughout the month hence material consumption will also be even.)

(iv) (b) **Calculation of Savings/ loss in Material A if purchase quantity equals to EOQ.**

	Purchase Quantity = 15,000 kg.	Purchase Quantity = EOQ i.e. 13,856 kg.
Annual consumption	3,60,000 kg. (30,000 × 12 months)	3,60,000 kg. (30,000 × 12 months)
No. of orders [Note- (i)]	30 (3,60,000 ÷ 12,000)	30 (3,60,000 ÷ 12,000)
Ordering Cost (a)	₹36,000 (₹1200 × 30)	₹36,000 (₹1200 × 30)
Carrying Cost (b) [Note- (ii)]	₹30,375 (15% of ₹27 × 7,500)	₹31,176 (15% of ₹30 × 6,928)
Purchase Cost (c) (for good portion)	₹97,20,000 (₹27 × 3,60,000)	₹1,08,00,000 (₹30 × 3,60,000)

Loss due to obsolescence (d) [Note- (iii)]	₹24,30,000 [₹27 × (30 × 3,000)]	₹16,70,400 [₹30 × (30 × 1,856)]
Total Cost [(a) + (b) + (c) + (d)]	₹ 1,22,16,375	₹ 1,25,37,576

Purchasing of material -A at present policy of 15,000 kg. saves **₹ 3,21,201**.

Notes: (i) Since, material gets obsolete after 10 days, the quantity in excess of 10 days consumption i.e. 12,000 kg. are wasted. Hence, after 12,000 kg. a fresh order needs to be given.

(ii) Carrying cost is incurred on average stock of Materials purchased.

(iii) the excess quantity of material becomes obsolete and loss has to be incurred.

(v) (c) Minimum Stock Level for Material A

= Re-order level – (Average Consumption Rate x Average Re-order Period)

= 2400 – (1200 x 1.5) = **600 kgs**

Re-order level = Max. Consumption* × Max. Lead time
= 30,000/25 × 2 days = 2,400 kg.

Average Consumption Rate = (30,000/25 + 30,000/25)/2
= 1,200 Kg

Average Re-order Period = (1 + 2)/2 = 1.5 Days

Stock required for 10 days consumption is lower than the maximum stock level calculated through the formula. Therefore, Maximum Stock Level will be 12,000 kg.

(*Since, production is processed evenly throughout the month hence material consumption will also be even.)

2. (i) (c) Output by experienced workers in 50,000 hours = $\frac{50,000}{10}$
 = 5,000 units
 \therefore Output by new recruits = 60% of 5,000 = 3,000 units
 Loss of output = 5,000 – 3,000 = 2,000 units
 Total loss of output = Due to delay recruitment +
 Due to inexperience
 = 10,000 + 2,000 = **12,000 units**
- (ii) (a) Contribution per unit = 20% of ₹ 180 = ₹ 36
 Total contribution lost = ₹ 36 × 12,000 units = **₹ 4,32,000**
- (iii) (b) Cost of repairing defective units = 3,000 units × 0.2 × ₹ 25
 = **₹ 15,000**

(iv) (d) **Calculation of loss of profit due to labour turnover**

	(₹)
Loss of Contribution	4,32,000
Cost of repairing defective units	15,000
Recruitment cost	1,56,340
Training cost	1,13,180
Settlement cost of workers leaving	1,83,480
Profit forgone in 2022-23	9,00,000

- (v) (c) Output by experienced workers in 50,000 hours = $\frac{50,000}{10}$
 = 5,000 units
 \therefore Output by new recruits = 60% of 5,000 = 3,000 units
 Loss of output = 5,000 – 3,000 = **2,000 units**
3. (i) (d) Budgeted Machine hour rate (Blanket rate)
 = $\frac{\text{₹ } 50,40,000}{6,000 \text{ hours}} = \text{₹ } 840 \text{ per hour}$

(ii) (a) ₹ 25,20,000

(iii) (a)

	Amount (₹)	Amount (₹)
Total production overheads actually incurred during the period		34,08,000
Less: Amount paid to worker as per court order	4,50,000	
Expenses of previous year booked in the current year	1,00,000	
Wages paid for the strike period under an award	4,20,000	
Obsolete stores written off	36,000	10,06,000
		24,02,000
Less: Production overheads absorbed as per machine hour rate (3,000 hours × ₹ 840*)		25,20,000
Amount of over absorbed production overheads		1,18,000

* Budgeted Machine hour rate (Blanket rate) calculated in part (i)

(iv) (b) **Accounting treatment of over absorbed production overheads:** As, 40% of the over absorbed overheads were due to defective production policies, this being abnormal, hence should be credited to Costing Profit and Loss Account.

Amount to be credited to Costing Profit and Loss Account

= ₹ 1,18,000 × 40% = ₹ 47,200.

Balance of over absorbed production overheads should be distributed over Works in progress, Finished goods and Cost of sales by applying supplementary rate*.

Amount to be distributed = ₹ 1,18,000 × 60% = ₹ 70,800

Supplementary rate = $\frac{\text{₹ 70,800}}{1,50,000 \text{ units}} = \text{₹ 0.472 per unit}$

- (v) (c) Apportionment of over absorbed production overheads over WIP, Finished goods and Cost of sales:

	Equivalent completed units	Amount (₹)
Work-in-Progress (80,000 units × 50% × 0.472)	40,000	18,880
Finished goods (20,000 units × 0.472)	20,000	9,440
Cost of sales (90,000 units × 0.472)	90,000	42,480
Total	1,50,000	70,800

4. Working note:

1. Computation of revenues (at listed price), discount, cost of goods sold and customer level operating activities costs:

	Customers				
	A	B	C	D	E
Units sold: (a)	4,500	6,000	9,500	7,500	12,750
Revenues (at listed price) (₹): (b) {(a) × ₹6,480}	2,91,60,000	3,88,80,000	6,15,60,000	4,86,00,000	8,26,20,000
Revenues (at listed price) (₹): (c) {(a) × Actual selling price}	2,91,60,000 (4,500 × 6,480)	3,82,32,000 (6,000 × 6,372)	5,64,30,000 (9,500 × 5,940)	4,69,80,000 (7,500 × 6,264)	7,43,58,000 (12,750 × 5,832)
Discount (₹) (d) {(b) – (c)}	0	6,48,000	51,30,000	16,20,000	82,62,000

Cost of goods sold (₹) : (e) {(a) x ₹5,400}	2,43,00,000	3,24,00,000	5,13,00,000	4,05,00,000	6,88,50,000
Customer level operating activities costs					
Order taking costs (₹): (No. of purchase orders x ₹ 4,500)	67,500	1,12,500	1,35,000	1,12,500	1,35,000
Customer visits costs (₹) (No. of customer visits x ₹ 3,600)	7,200	10,800	21,600	7,200	10,800
Delivery vehicles travel costs (₹) (Kms travelled by delivery vehicles x ₹ 7.50 per km.)	1,500	1,350	2,250	3,000	4,500
Product handling costs (₹) {(a) x ₹ 22.50}	1,01,250	1,35,000	2,13,750	1,68,750	2,86,875
Cost of expediting deliveries (₹) {No. of expedited deliveries x ₹ 13,500}	-	-	-	-	13,500
Total cost of customer level operating activities (₹)	1,77,450	2,59,650	3,72,600	2,91,450	4,50,675

Computation of Customer level operating income

	Customers				
	A	B	C	D	E
	(₹)	(₹)	(₹)	(₹)	(₹)
Revenues (At list price) (Refer to working note)	2,91,60,000	3,82,32,000	5,64,30,000	4,69,80,000	7,43,58,000
Less: Cost of	(2,43,00,000)	(3,24,00,000)	(5,13,00,000)	(4,05,00,000)	(6,88,50,000)

goods sold (Refer to working note)					
Gross margin	48,60,000	58,32,000	51,30,000	64,80,000	55,08,000
Less: Customer level operating activities costs (Refer to working note)	(1,77,450)	(2,59,650)	(3,72,600)	(2,91,450)	(4,50,675)
Customer level operating income	46,82,550	55,72,350	47,57,400	61,88,550	50,57,325

5. **Statement of Cost of P Ltd. for the year ended 31st December, 2023:**

Sl. No.	Particulars	Amount (₹)	Amount (₹)
(i)	Material Consumed:		
	- Raw materials purchased	5,00,00,000	
	- Freight inward	9,20,600	
	Add: Opening stock of raw materials	10,00,000	
	Less: Closing stock of raw materials	(8,40,000)	5,10,80,600
(ii)	Direct employee (labour) cost:		
	- Wages paid to factory workers		25,20,000
(iii)	Direct expenses:		
	- Royalty paid for production	1,80,000	
	- Amount paid for power & fuel	3,50,000	
	- Job charges paid to job workers	3,10,000	8,40,000
	Prime Cost		5,44,40,600
(iv)	Works/ Factory overheads:		
	- Stores and spares consumed	1,10,000	
	- Repairs & Maintenance paid for plant & machinery	40,000	
	- Insurance premium paid for plant & machinery	28,200	
	- Insurance premium paid for factory building	18,800	

	- Expenses paid for pollution control and engineering & maintenance	36,000	2,33,000
	Gross factory cost		5,46,73,600
	Add: Opening value of W-I-P		8,60,000
	Less: Closing value of W-I-P		(6,60,000)
	Factory Cost		5,48,73,600
(v)	Quality control cost:		
	- Expenses paid for quality control check activities		18,000
(vi)	Research & development cost paid for improvement in production process		20,000
(vii)	Less: Realisable value on sale of scrap and waste		(48,000)
(viii)	Add: Primary packing cost		46,000
	Cost of Production		5,49,09,600
	Add: Opening stock of finished goods		12,00,000
	Less: Closing stock of finished goods		(10,50,000)
	Cost of Goods Sold		5,50,59,600
(ix)	Administrative overheads:		
	- Depreciation on office building	50,000	
	- Salary paid to General Manager	6,40,000	
	- Fee paid to independent directors	1,20,000	8,10,000
(x)	Selling overheads:		
	- Repairs & Maintenance paid for sales office building	20,000	
	- Salary paid to Manager- Sales & Marketing	5,60,000	
	- Performance bonus paid to sales staffs	1,20,000	7,00,000
(xi)	Distribution overheads:		
	- Packing cost paid for re-distribution of finished goods		80,000
	Cost of Sales		5,66,49,600

6. **Statement of Profit as per financial records**
(for the year ended March 31, 2023)

	(₹)		(₹)
To Opening stock:		By Sales	20,80,000
Finished goods	76,525	By Closing stock:	
Work-in-process	33,000	Finished Goods	43,250
To Raw materials consumed	7,84,000	Work-in-Process	48,200
To Direct labour	4,65,000	By Rent received	72,000
To Factory overheads	2,65,000	By Interest received	18,500
To Goodwill written off	95,000		
To Administration overheads	3,15,000		
To Selling & distribution overheads	65,000		
To Income tax paid	72,000		
To Bad debts	21,000		
To Profit	70,425		
	22,61,950		22,61,950

Statement of Profit as per costing records
(for the year ended March 31, 2023)

	(₹)	(₹)
Sales revenue (14,500 units) (A)		20,80,000
<u>Cost of Sales:</u>		
Opening stock (875 units x ₹ 105)	91,875	
Add: Cost of production of 14,000 units (Refer to Working Note 1 & 2)	18,15,360	
Less: Closing stock $\left(\frac{₹18,15,360 \times 375 \text{ units}}{14,000 \text{ units}} \right)$	(48,626)	

Production cost of goods sold (14,500 units)	18,58,609	
Selling & distribution overheads (14,500 units x ₹ 5)	72,500	
Cost of sales: (B)	19,31,109	19,31,109
Profit: {(A) – (B)}		1,48,891

Workings:

1. Number of units produced	Units
Sales	14,500
Add: Closing stock	<u>375</u>
Total	14,875
Less: Opening stock	<u>875</u>
Number of units produced	<u>14,000</u>

Cost Sheet

	(₹)	(₹)
Raw materials consumed		7,84,000
Direct labour		4,65,000
<i>Prime cost</i>		12,49,000
Factory overheads (60% of direct wages)		2,79,000
<i>Factory cost</i>		15,28,000
Add: Opening work-in-process		33,000
Less: Closing work-in-process		(48,200)
<i>Factory cost of goods produced</i>		15,12,800
Administration overheads (20% of factory cost)		3,02,560
Cost of production of 14,000 units		18,15,360

Cost of production per unit:

$$= \frac{\text{Total Cost of Production}}{\text{No. of units produced}} = \frac{\text{₹ 18,15,360}}{14,000 \text{ units}} = \text{₹ 129.67}$$

Statement of Reconciliation
(Reconciling the profit as per costing records with the profit as per financial records)

	(₹)	(₹)
Profit as per Cost Accounts		1,48,891
Add: Factory overheads over absorbed (₹ 2,79,000 – ₹ 2,65,000)	14,000	
S & D overheads over absorbed (₹ 72,500 – ₹ 65,000)	7,500	
Opening stock overvalued (₹ 91,875 – ₹ 76,525)	15,350	
Interest received	18,500	
Rent received	72,000	1,27,350
		2,76,241
Less: Administration overheads under recovery (₹ 3,15,000 – ₹ 3,02,560)	12,440	
Closing stock overvalued (₹ 48,626 – ₹ 43,250)	5,376	
Goodwill written off	95,000	
Income tax paid	72,000	
Bad debts	21,000	2,05,816
Profit as per financial accounts		70,425

7. Workings:

1. Maximum number of bottles that can be processed in a batch:

$$= \frac{5,000 \text{ ltrs}}{\text{Bottle volume}}$$

Large		Medium		Small	
Qty (ltr)	Max bottles	Qty (ltr)	Max bottles	Qty (ltr)	Max bottles
3	1,666	1.5	3,333	0.6	8,333

*For simplicity of calculation small fractions has been ignored.

2. Number of batches to be run:

		Large	Medium	Small	Total
A	Demand	3,00,000	7,50,000	20,00,000	
B	Bottles per batch (Refer WN-1)	1,666	3,333	8,333	
C	No. of batches $[A \div B]$	180	225	240	645

*For simplicity of calculation small fractions has been ignored.

Quantity of Material-W and Material C required to meet demand:

	Particulars	Large	Medium	Small	Total
A	Demand (bottle)	3,00,000	7,50,000	20,00,000	
B	Qty per bottle (Litre)	3	1.5	0.6	
C	Output (Litre) $[A \times B]$	9,00,000	11,25,000	12,00,000	32,25,000
D	Material-W per litre of output (Litre)	14	14	14	
E	Material-W required (Litre) $[C \times D]$	1,26,00,000	1,57,50,000	1,68,00,000	4,51,50,000
F	Material-C required per litre of output (ml)	25	25	25	
G	Material-C required (Litre) $[(C \times F) \div 1000]$	22,500	28,125	30,000	80,625

3. No. of Man-shift required:

		Large	Medium	Small	Total
A	No. of batches	180	225	240	645
B	Hours required per batch	2	2	2	

	(Hours)				
C	Total hours required (Hours) [A×B]	360	450	480	1,290
D	No. of shifts required [C÷8]	45	57	60	162
E	Total manshift workers] [D×20]	900	1,140	1,200	3,240

4. Power consumption in Kwh

		Large	Medium	Small	Total
For processing					
A	No. of batches	180	225	240	645
B	Hours required per batch (Hours)	1.75	1.75	1.75	1.75
C	Total hours required (Hours) [A×B]	315	393.75	420	1,128.75
D	Power consumption per hour	90	90	90	90
E	Power consumption in Kwh [C×D]	28,350	35,437.5	37,800	1,01,587.5
F	Per batch consumption (Kwh) [E÷A]	157.5	157.5	157.5	157.5
For set-up					
G	Hours required per batch (Hours)	0.25	0.25	0.25	0.25
H	Total hours required (Hours) [A×G]	45	56.25	60	161.25
I	Power consumption per hour [20%×90]	18	18	18	18
J	Power consumption in Kwh [H×I]	810	1,012.5	1,080	2,902.5
K	Per batch consumption (Kwh) [J÷A]	4.5	4.5	4.5	4.5

Calculation of Profit/ loss per batch:

	Particulars	Large	Medium	Small	Total
A	Demand (bottle)	3,00,000	7,50,000	20,00,000	30,50,000
B	Price per bottle (₹)	150	90	50	
C	Sales value (₹) [A×B]	4,50,00,000	6,75,00,000	10,00,00,000	21,25,00,000
	Direct Material cost:				
E	Material-W (₹) [Qty in WN-3 × ₹ 0.50]	63,00,000	78,75,000	84,00,000	2,25,75,000
F	Material-C (₹) [Qty in WN-3 × ₹1,000]	2,25,00,000	2,81,25,000	3,00,00,000	8,06,25,000
G	[E+F]	2,88,00,000	3,60,00,000	3,84,00,000	10,32,00,000
H	Direct Wages (₹) [Man-shift in WN-4 × ₹ 880]	7,92,000	10,03,200	10,56,000	28,51,200
I	Packing cost (₹) [A×₹3]	9,00,000	22,50,000	60,00,000	91,50,000
	Power cost (₹)				
J	For processing (₹) [WN-5 × ₹7]	1,98,450	2,48,062.5	2,64,600	7,11,112.5
K	For set-up time (₹) [WN-5 × ₹7]	5,670	7,087.5	7,560	20,317.5
L	[J+K]	2,04,120	2,55,150	2,72,160	7,31,430
M	Other variable cost (₹) [No. of batch in WN-2 × ₹ 30,000]	54,00,000	67,50,000	72,00,000	1,93,50,000
N	Total Variable cost per batch	3,60,96,120	4,62,58,350	5,29,28,160	13,52,82,630

	[G+H+I+L+M]				
O	Profit/ loss before fixed cost [C-N]	89,03,880	2,12,41,650	4,70,71,840	7,72,17,370
P	Fixed Cost				4,90,00,000
Q	Total Cost [O-P]				2,82,17,370

Computation of Economic Batch Quantity (EBQ):

$$EBQ = \sqrt{\frac{2 \times D \times S}{C}}$$

D = Annual Demand for the Product = Refer A below

S = Set-up cost per batch = Refer D below

C = Carrying cost per unit per annum =Refer E below

	Particulars	Large	Medium	Small
A	Annual Demand (bottle)	3,00,000	7,50,000	20,00,000
Set-up Cost:				
B	Power cost for set-up time (₹) [Consumption per batch in WN-5 × ₹7]	31.50	31.50	31.50
C	Other variable cost (₹) *	30,000	30,000	30,000
D	Total Set-up cost [B+C]	30,031.50	30,031.50	30,031.50
E	Holding cost:	1.00	1.00	1.00
F	EBQ (Bottle)	1,34,234	2,12,243	3,46,592

* Other variable cost is assumed to be part of set-up cost.

8. (i) Statement of Equivalent Production (FIFO Method)

Input		Output		Equivalent Production					
				Materials		Labour		Overheads	
Details	Units	Details	Units	%	Units	%	Units	%	Units
Opening	600	Finished goods							

Stock		transferred to next process:							
		-From opening stock	600	-	-	40	240	40	240
		-From fresh materials	8,300	100	8,300	100	8,300	100	8,300
		Closing W-I-P	700	100	700	70	490	70	490
Fresh inputs	9,200	Normal loss	392	-	-	-	-	-	-
			9,992		9,000		9,030		9,030
		Less: Abnormal Gain	(192)	100	(192)	100	(192)	100	(192)
	9,800		9,800		8,808		8,838		8,838

(ii) Statement of Cost per equivalent units

Elements	(₹)	Cost (₹)	Equivalent units	Cost per equivalent Unit (₹)
Material Cost	55,200			
Less: Scrap realisation 392 units @ ₹ 6/- p.u.	<u>2,352</u>	52,848	8,808	6.00
Labour cost		18,600	8,838	2.10
Overheads		<u>8,630</u>	8,838	<u>0.98</u>
Total Cost		<u>80,078</u>		<u>9.08</u>

Cost of Abnormal Gain – 192 Units

	(₹)	(₹)
Material cost of 192 units @ ₹ 6.00/- p.u.	1,152.00	
Labour cost of 192 units @ ₹ 2.10/- p.u.	403.20	
Overheads of 192 units @ ₹ 0.98/- p.u.	<u>188.16</u>	<u>1,743.36</u>

(iii) Cost of closing WIP – 700 Units

Material cost of 700 equivalent units @ ₹ 6.00/- p.u.	4,200.00	
Labour cost of 490 equivalent units @ ₹2.10/- p.u.	1,029.00	
Overheads of 490 equivalent @ ₹ 0.98/- p.u.	<u>480.20</u>	<u>5709.20</u>

(iv) Calculation of cost of 8,900 units transferred to next process

(₹)

(i) Cost of opening W-I-P Stock b/f – 600 units	4,200.00
(ii) Cost incurred on opening W-I-P stock	
Material cost	—
Labour cost 240 equivalent units @ ₹ 2.10 p.u.	504.00
Overheads 240 equivalent units @ ₹ 0.98/- p.u.	<u>235.20</u>
	739.20
(iii) Cost of 8,300 completed units	
8,300 units @ ₹9.08 p.u.	<u>75,364.00</u>
Total cost [(i) + (ii) + (iii)]	<u>80,303.20</u>

9. Workings:**1. Calculation of Depreciation per month:**

	Particulars	CNG Car	EV Car
A	Car purchase price (₹)	9,20,000	15,20,000
B	Less: Govt. subsidy (₹)	--	(1,50,000)
C	Less: Residual value (₹)	(95,000)	(1,70,000)
D	Depreciable value of car (₹) [A-B-C]	8,25,000	12,00,000
E	Life of the car	15 years	10 years
F	Annual depreciation (₹) [D÷E]	55,000	1,20,000
G	Depreciation per month (₹) [F÷12]	4,583.33	10,000

2. Fuel/ Electricity consumption cost per month:

	Particulars	CNG Car	EV Car
A	Average distance covered in a month (KM)	1,500	1,500
B	Mileage (KM)	20	240
C	Qty. of CNG/ Full charge required $[A \div B]$	75 kg.	6.25
D	Electricity Consumption $[C \times 30\text{kwh}]$	-	187.5
E	Cost of CNG per kg (₹)	60	-
F	Power cost per Kwh (₹)	-	7.60
G	CNG Cost per month (₹) $[C \times E]$	4,500	-
H	Power cost per month (₹) $[D \times F]$	-	1,425

3. Amortised cost of Tyre replacement:

	Particulars	CNG Car	EV Car
A	Life of vehicle	15 years	10 years
B	Replacement interval	5 years	5 years
C	No. of time replacement required	2 times	1 time
D	Cost of tyres for each replacement (₹)	16,000	16,000
E	Total replacement cost (₹) $[C \times D]$	32,000	16,000
F	Amortised cost per year (₹) $[E \div A]$	2,133.33	1,600
E	Cost per month (₹) $[F \div 12]$	177.78	133.33

4. Amortised cost of Battery replacement:

	Particulars	CNG Car	EV Car
A	Life of vehicle	15 years	10 years
B	Replacement interval	8 years	8 years
C	No. of time replacement required	1 time	1 time
D	Cost of battery for each replacement (₹)	12,000	5,40,000
E	Total replacement cost (₹) $[C \times D]$	12,000	5,40,000
F	Amortised cost per year (₹) $[E \div A]$	800	54,000
E	Cost per month (₹) $[F \div 12]$	66.67	4,500

Calculation of Operating cost per month

	Particulars	CNG Car (₹)	EV Car (₹)
A	Running cost:		
	Fuel cost/ Power consumption cost [Refer WN-2]	4,500	1,425
B	Maintenance cost:		
	Annual Maintenance cost [Annual cost ÷ 12]	666.67	433.33
	Annual Insurance cost [Annual cost ÷ 12]	633.33	1,216.67
	Amortised cost of Tyre replacement [Refer WN-3]	177.78	133.33
	Amortised cost of Battery replacement [Refer WN-4]	66.67	4,500
		1,544.45	6,283.33
C	Fixed cost:		
	Depreciation [Refer WN-1]	4,583.33	10,000
	Driver's salary	20,000	20,000
	Garage rent	4,500	4,500
	Share of Office & Administration cost	1,500	1,500
		30,583.33	36,000
D	Operating cost per month [A+B+C]	36,627.78	43,708.33

10. Workings:

1. Calculation of Standard Qty. of Explosives and Detonators for actual output:

	Particulars	Coal	Overburden (OB)	Total
SME:				
A	Actual Output	20,000 tonne	58,000 M ³	

B	Standard Qty per unit	2.4 kg./ tonne	1.9 kg./M ³	
C	Standard Qty. for actual production [A×B]	48,000 kg.	1,10,200 kg.	1,58,200 kg.
Detonators:				
D	Standard Qty per unit	2 pcs/ tonne	2 pcs/ M ³	
E	Standard Qty. for actual production [A × D]	40,000 pcs.	1,16,000 pcs	1,56,000 pcs

2. Calculation of Actual Price per unit of materials:

Material	Quantity [A]	Amount (₹) [B]	Rate (₹) [C = B÷A]
SME	1,67,200 kg.	63,53,600	38.00
Detonators	1,18,400 pcs	24,27,200	20.50

Computation of material price variance:

Material Price Variance = Actual Qty. × (Std. Price - Actual Price)

SME = 1,67,200 kg. × (₹40 – ₹38) = ₹3,34,400 (F)

Detonators = 1,18,400 pcs × (₹20 – ₹20.5) = ₹59,200 (A)

Total = ₹2,75,200 (F)

Computation of material quantity variance:

Material Qty. Variance = Std. Price × (Std. Qty for actual output - Actual Qty.)

SME = ₹40 × (1,58,200 kg. - 1,67,200 kg.) = ₹3,60,000 (A)

Detonators = ₹20 × (1,56,000 pcs - 1,18,400 pcs) = ₹7,52,000 (F)

Total = ₹3,92,000 (F)

Computation of material cost variance:

Material cost variance = Std. cost – Actual Cost

Or, (Std. Price × Std. Qty) – (Actual Price × Actual Qty.)

$$\begin{aligned}\text{SME} &= (\text{₹ } 40 \times 1,58,200 \text{ kg}) - (\text{₹ } 38 \times 1,67,200 \text{ kg.}) \\ &= \text{₹ } 63,28,000 - \text{₹ } 63,53,600 = \text{₹ } 25,600 \text{ (A)}\end{aligned}$$

$$\begin{aligned}\text{Detonators} &= (\text{₹ } 20 \times 1,56,000 \text{ pcs}) - (\text{₹ } 20.50 \times 1,18,400 \text{ pcs}) \\ &= \text{₹ } 31,20,000 - \text{₹ } 24,27,200 = 6,92,800 \text{ (F)}\end{aligned}$$

Total = ₹6,67,200 (F)

11. Workings:**Calculation of Cost of Goods Sold (COGS):**

$$\begin{aligned}\text{COGS} &= \{(\text{DM- } 0.3 \text{ COGS}) + (\text{DL- } 0.15 \text{ COGS}) + (\text{FOH- } 0.10 \text{ COGS} + \\ &\quad \text{₹ } 2,30,000) + (\text{G\&AOH- } 0.02 \text{ COGS} + \text{₹ } 71,000)\}\end{aligned}$$

$$\text{Or COGS} = 0.57 \text{ COGS} + \text{₹ } 3,01,000$$

$$\text{Or COGS} = \frac{\text{₹ } 3,01,000}{0.43} = \text{₹ } 7,00,000$$

Calculation of Cost of Sales (COS):

$$\text{COS} = \text{COGS} + (\text{S\&DOH- } 0.04 \text{ COS} + \text{₹ } 68,000)$$

$$\text{Or COS} = \text{₹ } 7,00,000 + (0.04 \text{ COS} + \text{₹ } 68,000)$$

$$\text{Or COS} = \frac{\text{₹ } 7,68,000}{0.96} = \text{₹ } 8,00,000$$

Calculation of total Fixed Costs:

Factory Overhead	₹ 2,30,000
General & Administration OH	₹ 71,000
Selling & Distribution OH	₹ 68,000
	<u>₹ 3,69,000</u>

Calculation of Variable Costs:

Direct Material	(0.3 × ₹ 7,00,000)	₹ 2,10,000
Direct Labour	(0.15 × ₹ 7,00,000)	₹ 1,05,000
Factory Overhead	(0.10 × ₹ 7,00,000)	₹ 70,000
General & Administration OH	(0.02 × ₹ 7,00,000)	₹ 14,000
Selling & Distribution OH	(0.04 × ₹ 8,00,000)	₹ 32,000
		<u>₹ 4,31,000</u>

Calculation of P/V Ratio:

$$\begin{aligned} \text{P/V Ratio} &= \frac{\text{Contribution}}{\text{Sales}} \times 100 = \frac{\text{Sales} - \text{Variable Costs}}{\text{Sales}} \times 100 \\ &= \frac{(\text{₹}185 \times 5,000 \text{ units}) - \text{₹}4,31,000}{\text{₹}185 \times 5,000 \text{ units}} \times 100 = 53.41\% \end{aligned}$$

$$(i) \quad \text{Break-Even Sales} = \frac{\text{Fixed Costs}}{\text{P/V Ratio}} = \frac{\text{₹}3,69,000}{53.41\%} = \text{₹}6,90,882$$

$$\begin{aligned} (ii) \quad \text{Profit earned during the last year} &= (\text{Sales} - \text{Total Variable Costs}) - \text{Total Fixed Costs} \\ &= (\text{₹}9,25,000 - \text{₹}4,31,000) - \text{₹}3,69,000 \\ &= \text{₹}1,25,000 \end{aligned}$$

$$\begin{aligned} (iii) \quad \text{Margin of Safety (\%)} &= \frac{\text{Sales} - \text{Break-even sales}}{\text{Sales}} \times 100 \\ &= \frac{\text{₹}9,25,000 - \text{₹}6,90,882}{\text{₹}9,25,000} \times 100 = 25.31\% \end{aligned}$$

$$\begin{aligned} (iv) \quad \text{Profit if the sales were 10\% less than the actual sales:} \\ \text{Profit} &= 90\% (\text{₹}9,25,000 - \text{₹}4,31,000) - \text{₹}3,69,000 \\ &= \text{₹}4,44,600 - \text{₹}3,69,000 = \text{₹}75,600 \end{aligned}$$

12. Revenue Budget (Flexible Budget) of M Ltd. for the Year 2024

	Particulars	PY 2023	CY 2024
A	Sales Volume (Tonnes)	4,20,000	4,70,400 [112%×4,20,000]
B	Selling Price per tonne (₹)	23,000	23,000
		(₹ in lakh)	(₹ in lakh)
C	Sales value [A×B]	96,600	1,08,192
D	Raw material Cost:		
(i)	Qty. of Material [2.3 tonnes × A] (tonnes)	9,66,000	10,81,920
(ii)	Price per tonne (₹)	4,500	4,500
(iii)	Total raw material cost [(i)×(ii)]	43,470	48,686.40
E	Wages & Salary Cost:		
(i)	Wages to casual employees (15%×6,000 = 900 employees)	2,386.80 [900×26×12×₹850]	2,508.47 [900×26×12×₹893.33]
(ii)	Salary to permanent employees (85%×6,000 = 5,100 employees)	47,736 [5100×26×12×₹3,000]	51,316.20 [(5100×26×6×₹3,000) + (5100×26×6×₹3,450)]
(iii)	Total wages & salary [(i) + (ii) + (iii)]	50,122.80	53,824.67
F	Power cost:		
(i)	For production (units)	4,20,000 [60%×7,00,000]	4,70,400 [112%×4,20,000]
(ii)	For employees & offices (units)	2,80,000 [40%×7,00,000]	2,80,000

(iii)	Total Power consumption (units) [(i)+(ii)]	7,00,000	7,50,400
(iv)	Power rate per unit (₹) [₹42,00,000 ÷ 7,00,000]	6.00	6.00
(v)	Total power cost [(iii) × (iv)]	42	45.024
G	Safety and maintenance Cost	60	67.20 [112% × 4,20,000]
H	Diesel cost	1.2	-
I	Car Hire charge:		
(i)	Car hire charge	6	6
(ii)	Fuel reimbursement cost	-	1.38 [115% × 1.2]
(iii)	GST@5% on RCM basis [5% × (i+ii)]	-	0.369
(iv)	Total Car hire charge cost [(i) + (ii) + (iii)]	6	7.749
J	Depreciation	8,040	6,834 [85% × 8040]
K	Total Cost [Sum of D to J]	1,01,742	1,09,465.043
L	Profit/ (Loss) [C-L]	(5,142)	(1273.043)

13. (a) In integrated accounting system cost and financial accounts are kept in the same set of books. Such a system will have to afford full information required for Costing as well as for Financial Accounts. In other words, information and data should be recorded in such a way so as to enable the firm to ascertain the cost (together with the necessary analysis) of each product, job, process, operation or any other identifiable activity. It also ensures the ascertainment of marginal cost, variances, abnormal losses and gains. In fact, all

information that management requires from a system of Costing for doing its work properly is made available. The integrated accounts give full information in such a manner so that the profit and loss account and the balance sheet can be prepared according to the requirements of law and the management maintains full control over the liabilities and assets of its business.

Since, only one set of books are kept for both cost accounting and financial accounting purpose so there is no necessity of reconciliation of cost and financial accounts.

(b) The impact of IT in cost accounting may include the followings:

- (i) After the introduction of ERPs, different functional activities get integrated and as a consequence a single entry into the accounting system provides custom made reports for every purpose and saves an organisation from preparing different sets of documents. Reconciliation process of results of both cost and financial accounting systems become simpler and less sophisticated.
- (ii) A move towards paperless environment can be seen where documents like Bill of Material, Material Requisition Note, Goods Received Note, labour utilisation report etc. are no longer required to be prepared in multiple copies, the related department can get e-copy from the system.
- (iii) Information Technology with the help of internet (including intranet and extranet) helps in resource procurement and mobilisation. For example, production department can get materials from the stores without issuing material requisition note physically. Similarly, purchase orders can be initiated to the suppliers with the help of extranet. This enables an entity to shift towards Just-in-Time (JIT) approach of inventory management and production.
- (iv) Cost information for a cost centre or cost object is ascertained with accuracy in timely manner. Each cost centre and cost object is codified and all related costs are assigned

to the cost object or cost centre. This process automates the cost accumulation and ascertainment process. The cost information can be customised as per the requirement. For example, when an entity manufactures or provide services, it can know information job-wise, batch-wise, process-wise, cost centre wise etc.

- (v) Uniformity in preparation of report, budgets and standards can be achieved with the help of IT. ERP software plays an important role in bringing uniformity irrespective of location, currency, language and regulations.
- (vi) Cost and revenue variance reports are generated in real time basis which enables the management to take control measures immediately.
- (vii) IT enables an entity to monitor and analyse each process of manufacturing or service activity closely to eliminate non-value-added activities.

The above are examples of few areas where Cost Accounting is done with the help of IT.

- (c) **Controllable costs and Uncontrollable costs:** Cost that can be controlled, typically by a cost, profit or investment centre manager is called controllable cost. Controllable costs incurred in a particular responsibility centre can be influenced by the action of the executive heading that responsibility centre.

Costs which cannot be influenced by the action of a specified member of an undertaking are known as uncontrollable costs.

- (d) **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.



PAPER – 5: AUDITING AND ETHICS



QUESTIONS

PART – I: Multiple Choice Questions based on Case Scenarios

Case Scenario I

DS & Co., Chartered Accountants, are statutory auditors of SAR Industries Pvt Ltd, a company engaged in manufacturing business since 2018. The company is operating from rented premises and it does not have building of its own. It had upgraded its machinery last time in 2020. Except interest in this company, promoters, directors, key managerial persons and their relatives do not have interest or ownership in any other entity. Also, the company does not enter into any business dealings with promoters, directors, key managerial persons and their relatives. The directors and key managerial persons get only reasonable remuneration from the company. Though company has an internal control system in place, it has not appointed internal auditor. It is also not mandatorily required to make such an appointment under the provisions of the Companies Act, 2013.

DS & Co. have accepted audit of the above company for year 2022-23 for the first time. Promoters and directors of the company are known to engagement partner only socially for quite some time. However, it is for the first time that any type of professional work related to this company has been accepted by them.

While formulating audit plan for the company, CA D (engagement partner) has planned certain risk assessment procedures and further audit procedures consisting of tests of controls and substantive procedures in relation to different areas.

The following is extract of financial information of the company: -

(figures in rupees crores)

S. No.	Particulars	Year 2022-23	Year 2021-22
1.	Turnover	30.00	15.00
2.	Inventories	5.00	2.00
3.	Property, plant and equipment (Gross block)	1.25	1.25
4.	Property, plant and equipment (Net block)	1.00	1.25
5.	Gross profit	6.00	3.75
6.	Trade receivables	12.50	5.00

The PPE items consist of machinery only. While planning procedures in respect of Property, Plant and Equipment, auditor has included audit procedures like inspecting and reviewing company's plan for performing physical verification of PPE, assessing depreciation method used, verifying cost of PPE items acquired during the year with purchase bills and recalculation of depreciation charged in statement of profit and loss.

Further, while performing risk assessment procedures to identify risk of material misstatements in financial statements., engagement partner has come to notice that there is considerable variation in gross profit ratio as compared to last year. During performance of substantive procedures, he has also studied data of purchases and sales of the company during the year under audit and has also compared such data with preceding year and earlier years also.

Based on above, answer the following questions: -

- 1.1 Keeping in view description provided in the case scenario, which of the following statements is likely to be most appropriate?
 - (a) Engagement partner is known socially to promoters and directors of the company. The situation mandatorily involves advocacy threat casting a doubt on auditor's independence. Irrespective of this, detection risk in engagement is low.

- (b) Engagement partner is known socially to promoters and directors of the company. The situation mandatorily involves familiarity threat casting a doubt on auditor's independence. Irrespective of this, detection risk in engagement is high.
 - (c) The situation reflected in the case scenario may not constitute threat to independence of auditor. Irrespective of this, detection risk in engagement is low.
 - (d) The situation reflected in the case scenario may not constitute threat to independence of auditor. Irrespective of this, detection risk in engagement is high.
- 1.2 CA D has included in audit plan certain procedures in respect of PPE items. Which of the following audit procedure included in audit plan is not likely to be relevant?
- (a) Inspecting and reviewing company's plan for physical verification of PPE
 - (b) Assessing depreciation method used
 - (c) Verifying cost of PPE items acquired during the year with purchase bills
 - (d) Recalculation of depreciation charged in statement of profit and loss
- 1.3 Which of the following statements is likely to be most suitable to explain the fact relating to variation in gross profit ratio as compared to last year?
- (a) Gross profit ratio has decreased in year 2022-23 as compared to year 2021-22. It may be due to the reason that sales prices may have been reduced by the company to procure more orders.
 - (b) Gross profit ratio has increased in year 2022-23 as compared to year 2021-22. It may be due to the reason that cost of materials purchased by company could have decreased.
 - (c) Gross profit ratio has decreased in year 2022-23 as compared to year 2021-22. It may be due to the reason that office staff salary

engaged in administrative functions and office maintenance expenditure could have increased.

- (d) Gross profit ratio has decreased in year 2022-23 as compared to year 2021-22. It may be due to the reason that company has not made an allowance for obsolescence in respect of inventories during the year.
- 1.4 CA D has also studied purchases and sales data of the company during the year and has also compared such data with preceding year and earlier years also. It is an example of _____?
- (a) Ratio analysis forming part of substantive analytical procedures
 - (b) Trend analysis forming part of substantive analytical procedures
 - (c) Reasonable test forming part of substantive analytical procedures
 - (d) Structural modelling forming part of substantive analytical procedures
- 1.5 Considering case scenario in totality, identify which of following combination of Standards is not proper for their likely relevance in performing and completing above engagement?
- (a) SQC 1, SA 220, SA 501, SA 505
 - (b) SA 550, SA 510, SA 220, SA 610
 - (c) SA 700, SA 510, SA 220, SA 500
 - (d) SQC 1, SA 700

Case Scenario - 2

CA M. Raja has accepted offer of appointment of auditor of an entity. As business carried on by the entity is new to him, he wants to gain an understanding about the entity and its environment including its internal control. In this regard, he has performed procedures to obtain audit evidence about design and implementation of relevant controls. He has performed various procedures like inquiry, inspection and observation in this regard.

He wants reasonable assurance that accounting system is adequate and that all accounting information which should be recorded has, in fact, been recorded.

Further, during the course of audit, he has noticed as under: -

- As required by the management, bank reconciliation is required to be performed monthly. However, the same is not carried out as stipulated due to time constraints faced by accountant.
- The entity has a system of procuring its raw material supplies on the basis of valid purchase orders issued by the entity. However, purchase orders are not numbered in a sequence properly.
- Wage sheets are not verified by a responsible official as required by management.
- Staff of the entity is responsible for bringing cash from centers in nearby areas to entity's premises from where it is deposited into entity's bank account. However, concerned officer has not renewed insurance for cash in transit.

Based on above, answer the following questions: -

- 2.1 The auditor has performed procedures to obtain audit evidence about design and implementation of controls. Which of the following procedures is more reliable to obtain audit evidence relating to application of a control?
- (a) Observing application of control
 - (b) Inspecting documentation pertaining to control
 - (c) Inquiry about application of control
 - (d) Studying design of control
- 2.2 Examination and evaluation of internal control is indispensable for CA M. Raja. It provides him necessary comfort relating to completeness of accounting information. However, review of internal controls of the entity will not enable him to know _____
- (a) whether errors or frauds are likely to be located in ordinary course of operations of business
 - (b) whether an effective internal audit department is operating
 - (c) whether his opinion needs modification
 - (d) whether any administrative control has bearing on his work

- 2.3 As regards weaknesses identified by the auditor in control system, which of the following represent(s) significant deficiencies in internal control?
- (a) Not performing bank reconciliation timely and not verifying wage sheets by responsible official only
 - (b) Not performing bank reconciliation timely and lack of proper sequence in purchase orders only
 - (c) Not performing bank reconciliation timely, lack of proper sequence in purchase orders, not verifying wage sheets by responsible official and lack of insurance for cash in transit
 - (d) Lack of insurance for cash in transit only
- 2.4 Which of the following is most appropriate regarding auditor's responsibility in accordance with SA 265?
- (a) To communicate significant deficiencies in internal control to management
 - (b) To communicate significant deficiencies in internal control along with explanation of their potential effects to management
 - (c) To communicate significant deficiencies in internal control along with explanation of their potential effects, to provide sufficient information to understand context of communication to management and express opinion on effectiveness of internal control
 - (d) To communicate significant deficiencies in internal control along with explanation of their potential effects and to provide sufficient information to understand context of communication to management

General MCQs

1. CA Muskan is auditor of two concerns viz. Well Star Homes and Well Star Stores. The partners in both the firms are common. While auditing financial statements of Well Star Homes, she has noticed that few expenditure bills pertaining to Well Star Stores have been entered in its books. Which assertion of Well Star Homes is disproved in above situation?

- (a) Completeness
 - (b) Accuracy
 - (c) Occurrence
 - (d) Classification
2. CA X is nearing completion of audit procedures during course of audit of a company. He has found nothing unusual till now. The company is earning handsome profits since last many years and there is little debt burden on it. It is also in the process of expanding its business by taking loan from a bank. The bank has also granted "in-principle" approval for lending money to the company. Which of the following statements is most appropriate in evaluation of going concern assumption being followed by management?
- (a) Appropriateness of management's assessment in relation to going concern assumption may be made by auditor without performing detailed evaluation procedures.
 - (b) Appropriateness of management's assessment in relation to going concern assumption would be made by auditor by performing detailed evaluation procedures.
 - (c) Appropriateness of going concern assumption would be made by auditor directly by skipping management's assessment.
 - (d) Appropriateness of going concern assumption would be made by auditor by necessarily examining cash flow forecast.
3. CA Piyush is offered appointment as statutory auditor of branch of a bank. He has also taken housing loan of ₹75 lakhs from the same bank. Identify threat to independence involved.
- (a) Advocacy threat
 - (b) Self-interest threat
 - (c) Self-review threat
 - (d) Familiarity threat
4. A Chartered Accountant finds during the course of statutory audit of a company that management is not serious about findings of internal

audit reports. No action has been taken on findings of internal auditor and reports for last two quarters are gathering dust.

He has further found that management has not disclosed information relating to transactions with another company. However, he has assiduously gathered that it is a related party by going through annual reports of past years and searching online database on MCA portal.

The described situation most appropriately denotes_____?

- (a) Objectivity
 - (b) Professional knowledge
 - (c) Independence
 - (d) Professional skepticism
5. You have been appointed as statutory auditor of a company for the first time. It has become very important for you to understand the company and its environment. Which of the following activities are not expected to be included in your attempts to know about the company and its environment?
- (a) Gaining a knowledge about debt structure of the company
 - (b) Evaluating whether company's accounting policies are appropriate for its business
 - (c) Understanding business risks faced by the company
 - (d) Gathering evidence about valuation of trade receivables of the company

PART II – Descriptive Questions

Chapter 1 - Nature, Objective and Scope of Audit

1. M Motors Ltd is a leading Indian automobile manufacturer with many offerings across commercial, passenger and electric vehicles. The Company is pioneering India's electric vehicle transition and enjoys considerable advantage in one of the fastest growing automotive markets.

GR & Associates have been appointed as its statutory auditors for financial year 2022-23. J and K are newly appointed audit assistants in the firm and are part of engagement team constituted for purpose of audit of M Motors Ltd. However, they are confused about what such an audit tends to achieve. They perceive audit as a guarantee against possible errors or frauds in financial statements. Do you agree with perception of both the assistants? In this context, outline objectives of an independent audit conducted in accordance with Standards on Auditing.

2. Standards on Auditing (SAs) apply in "audit of historical financial information" whereas Standards on Review Engagements (SREs) apply in "review of historical financial information." Explain in detail giving examples.

Chapter 2 - Audit Strategy, Audit Planning and Audit Programme

3. Preliminary engagement activities include certain activities to be performed by an auditor while planning an audit. Discuss such activities briefly. How performing such activities assists an auditor?
4. The assistant of CA K is assigned responsibility of drafting "audit programme" relating to purchases appearing in financial statements of "Broad Industries", a partnership firm. The said firm is a GST registered tax payer and is engaged in manufacturing of packing boxes from a special type of paper taxable under GST. Help him by drafting a sample audit programme for purchases.

Chapter 3 – Risk Assessment and Internal Control

5. Satranga Foods Private Limited is engaged in manufacturing of pickles. The auditors of the company have planned audit procedures in respect of recognition of revenues of the company. Despite that, there is a possibility that misstatements in revenue recognition are not identified by planned audit procedures. Identify and explain that particular risk in detail.
6. IT related risks can have an impact on audit. In what different ways, such risks can have an impact on audit of financial statements?

Chapter 4 – Audit Evidence

7. CA Kanika audited books of accounts of Engineering Ltd. for the financial year 2022-2023. The auditor used an audit procedure according to which all the documents and records maintained by the company were checked in detail to obtain audit evidence. Explain the audit procedure used by the auditor. Comment on reliability of audit evidence obtained by performing such an audit procedure in some situations.
8. CA J is conducting statutory audit of Gemini Ltd engaged in manufacturing of pharma products. The company is fairly large one and has a well-functioning internal audit department. While considering sending out external confirmation requests to trade receivables outstanding as on date of financial statements, CA J has delegated the process of choosing trade receivables, designing requests and receiving responses from customers to internal audit department. The responses are also received on the mail id of internal audit department. Is the approach of CA J proper?
9. The newly appointed auditor of BTN Limited wants to obtain sufficient appropriate audit evidence about whether the opening balances contain misstatements that materially affect the current period's financial statements. What audit procedures should he perform for this purpose?
10. SPR Ltd has been into the media business since 2001. During the F.Y 2022-2023, many notices were received by the company for hurting public sentiments and financial claims were filed against the company. As an auditor of the company, you requested the management for arranging the meeting with company's external legal counsel. Management is of the view that such meetings are necessary in certain circumstances only. Can you list down such circumstances?

Chapter 5 - Audit of Items of Financial Statements

11. Proceedings have been initiated against False Limited for holding benami property under law relating to prohibition of benami transactions and the rules made thereunder but such property is not recorded in books of accounts. As a consultant to the company, what

will you advise the company as far as disclosure requirements are concerned in financial statements in relation to said proceedings?

12. Droma Shoes Private Limited was established in year 2022-23 for manufacturing of footwear. As funds were needed to carry on its business activities - including for purchase of different raw materials, incurring of regular expenses like power and fuel and payment of wages etc., it had got sanctioned a credit facility amounting to ₹ 2 crores repayable on demand from a bank against primary security of its current assets and collateral security of residential house of one of its directors. Duly signed guarantee documents by directors in favour of bank also form part of bank's loan documentation. Account statement of above facility downloaded from bank's website shows debit balance of ₹ 1.85 crores as on 31st March, 2023. The operations in above credit facility are satisfactory. In this regard: -
- Identify nomenclature of such credit facility given by banks. How would above amount of ₹ 1.85 crores be reflected and classified in financial statements of company as on 31.3.23?
 - Also state specific disclosure requirements of Schedule III of Companies Act, 2013 in relation to above.

13. Following is extract of notes to accounts of financial statements of STU Private Limited listing some ratios. Discuss, whether disclosure, given in following manner meets requirements of Schedule III of the Companies Act, 2013. Ignore other ratios which are not listed in extract given below:

Name of ratio	31.3.2023	31.3.2022
Current ratio	2.50	2.30
Inventory turnover ratio	3.00	6.00
Trade receivables turnover ratio	1.75	5.00
Net profit ratio (in%)	13%	10%

Chapter 6 – Audit Documentation

14. Rajni, a CA student, has understood that SA 230 requires auditor to prepare audit documentation on a timely basis. While reading about SQC 1, she notices that time limit for completion of final audit file is ordinarily not more than 60 days after the date of auditor's report. She

finds it to be puzzling. Unable to comprehend, she seeks your guidance. Guide her.

15. Discussing meaning of completion memorandum, elaborate upon its importance.

Chapter 7 – Completion and Review

16. CA K is statutory auditor of DEMA Private Limited for the year 2022-23. The company has three plants in India. He is nearing completion of audit procedures relating to financial statements for the year under audit and has yet to sign audit report. Meanwhile, a huge fire had broken out in one of plants of the company located near Nashik on 25th June, 2023 damaging substantial part of machinery and work-in-process resulting in loss of about ₹ 5 crores. Unaware of the incident, he is in process of finalizing his report in first fortnight of July 2023. State few audit procedures to be performed by him to obtain sufficient appropriate evidence for identifying such events. Also explain auditor's responsibilities in this situation.
17. Kundan, a CA student, is part of an engagement team conducting audit of an entity. The audit procedures are nearing completion. He notices that engagement partner has asked for a cash flow forecast from management for next twelve months from date of financial statements. Keeping in view above, answer the following: -
 - (i) Discuss likely purpose of engagement partner in the above situation. Elaborate upon significance of such testing being performed by engagement partner.
 - (ii) State any two audit procedures in relation to cash flow forecast likely to be performed by engagement partner.

Chapter 8 – Audit Report

18. Mention some examples of circumstances where the auditor may consider it necessary to include an Emphasis of Matter paragraph.
19. CA. S, while conducting audit of an entity is facing the following issues: -
 - (i) He has not been provided with necessary support for attending inventory count process of entity as at year end.

- (ii) Accounts Manager is not providing him present addresses of customers as well as suppliers for sending external confirmations. Even mail ids have not been provided on the pretext of business confidentiality.
- (iii) He was not able to verify revenues of entity due to lack of complete details.
- (iv) He has been asking for bills on a sample basis for the purpose of verifying expenses, but staff has been making lame excuses.

The matter was brought to knowledge of higher management, but of no avail. The auditor, CA S has come to the conclusion that the possible effects on the financial statements of undetected misstatements would be material and affecting many aspects of financial statements and in such a case, a qualification of the opinion would be inadequate to communicate the gravity of the situation.

How should the auditor proceed in such a situation?

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

- 20. Pilfering is one of the greatest problems in any hotel and the importance of internal control cannot be undermined. Explain.
- 21. From a lessee's perspective, highlight main differences between an operating lease and finance lease only in relation to accounting treatment and tax benefits.

Chapter 10 – Audit of Banks

- 22. While conducting statutory audit of branch of a nationalized bank, it is noticed by CA Z that credit facilities granted to a borrower consisting solely of term loan have been classified as "Sub-standard Asset" during the year 2022-23 due to failure of borrower to pay EMIs on time. Such EMIs were outstanding for more than 90 days and account was, therefore, classified as "Sub-Standard Asset". CA Z has also agreed to above asset classification made by branch management.

What are CA Z's responsibilities regarding verification of compliance with income recognition norms by branch in respect of above credit facilities?

23. While verifying provisions of advances of a branch of MCO Bank as part of statutory branch audit, CA Z notices that credit facilities consisting of term loan to KRT Enterprises have been classified under doubtful asset (D1) category. The outstanding balance in above term loan account as on 31.3.2023 is ₹ 50 lakhs. Value of security held in account is ₹ 40 lakhs. The branch has made provision of ₹ 7.50 lakhs. Is provision made by branch proper? Discuss.

Chapter 11 – Ethics and Terms of Audit Engagements

24. CA X has been offered audit of financial statements of TDK Industries, a partnership firm. Prior to accepting proposed offer, he insists upon obtaining an agreement of management regarding acknowledgment of its responsibility of having a proper process in place to ensure that financial statements prepared are free from material misstatements. However, management is of the view that it is auditor's duty to detect material misstatements in financial statements and such an insistence by auditor is totally uncalled for. Whose view is proper? Also discuss reasons for arriving at your conclusion. What should be likely proper course of action for CA X in above situation?
25. "SA 220 is premised on the basis that the firm is subject to SQC 1". What do you understand by given statement in context of audit quality?



SUGGESTED ANSWERS/HINTS

Answer Key- Case Scenario - 1

Question No.	Answer
1.1	(d) The situation reflected in case scenario may not constitute threat to independence of auditor. Irrespective of this, detection risk in engagement is high.
1.2	(c) Verifying cost of PPE items acquired during the year with purchase bills
1.3	(a) Gross profit ratio has decreased in year 2022-23 as compared to year 2021-22. It may be due to the reason that sales prices

	may have been reduced by the company to procure more orders.
1.4	(b) Trend analysis forming part of substantive analytical procedures
1.5	(b) SA 550, SA 510, SA 220, SA 610

Answer Key- Case Scenario - 2

Question No.	Answer
2.1	(a) Observing application of control.
2.2	(c) whether his opinion needs modification
2.3	(c) Not performing bank reconciliation timely, lack of proper sequence in purchase orders, not verifying wage sheets by responsible official and lack of insurance for cash in transit
2.4	(d) To communicate significant deficiencies in internal control along with explanation of their potential effects and to provide sufficient information to understand context of communication to management.

General MCQs

- (c)** Occurrence
- (a)** Appropriateness of management's assessment in relation to going concern assumption may be made by auditor without performing detailed evaluation procedures.
- (b)** Self-interest threat
- (d)** Professional skepticism
- (d)** Gathering evidence about valuation of trade receivables of the company

Descriptive Answers

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

- (a) To obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework; and
- (b) To report on the financial statements, and communicate as required by the SAs, in accordance with the auditor's findings.

An analysis of above brings out following points clearly: -

- (1) Auditor's objective is to obtain a reasonable assurance whether financial statements as a whole are free from material misstatement whether due to fraud or error.

Reasonable assurance is to be distinguished from absolute assurance. Absolute assurance is a complete assurance or a guarantee that financial statements are free from material misstatements. However, reasonable assurance is not a complete guarantee. Although it is a high-level of assurance but it is not complete assurance.

Audit of financial statements is carried out by the auditor with professional competence and skills in accordance with Standards on Auditing. Audit procedures are applied in accordance with SAs, audit evidence is obtained and evaluated. On the basis of that, conclusions are drawn and opinion is formed. It leads to high level of assurance which is called as reasonable assurance but it is not absolute assurance.

- (2) Misstatements in financial statements can occur due to fraud or error or both. The auditor seeks to obtain reasonable assurance whether financial statements as a whole are free from material misstatements caused by fraud or error. He has to see effect of misstatements on financial statements as a whole, in totality.
- (3) Obtaining reasonable assurance that financial statements as a whole are free from material misstatements enables the auditor to express an opinion on whether the financial statements are

prepared, in all material respects, in accordance with an applicable financial reporting framework.

- (4) The opinion is reported and communicated in accordance with audit findings through a written report as required by Standards on Auditing.

Therefore, perception of both assistants is not proper. Auditor of financial statements does not seek to provide guarantee that financial statements are free from material misstatements caused by frauds or errors. He obtains reasonable assurance.

2. Standards on Auditing (SAs) apply in "audit of historical financial information" whereas Standards on Review Engagements (SREs) apply in "review of historical financial information". Standards on auditing apply in "audit" of historical financial information which is a reasonable assurance engagement whereas Standards on Review Engagements apply in "review" of historical financial information which is a limited assurance engagement only.

"Historical financial information means" information expressed in financial terms in relation to a particular entity, derived primarily from that entity's accounting system, about economic events occurring in past time periods or about economic conditions or circumstances at points in time in the past.

"Audit" and "review" are two different terms. Audit is a reasonable assurance engagement, and its objective is reduction in assurance engagement risk to an acceptably low level in the circumstances of the engagement. However, "review" is a limited assurance engagement, and its objective is a reduction in assurance engagement risk to a level that is acceptable in the circumstances of the engagement.

Standards on Auditing have been issued on wide spectrum of issues in the field of auditing including (but not limited to) overall objectives of independent auditor, audit documentation, planning an audit of financial statements, identifying and assessing risk of material misstatement, audit evidence, audit sampling, going concern and forming an opinion and reporting on financial statements.

Some examples of Standards on Auditing are:

- (i) SA 200 Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing
- (ii) SA 230 Audit Documentation
- (iii) SA 315 Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment
- (iv) SA 500 Audit Evidence
- (v) Revised SA 700 Forming an Opinion and Reporting on Financial Statements

Examples of Standards on Review engagements are

- (i) SRE 2400 (Revised) Engagements to Review Historical Financial Statements
- (ii) SRE 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity

3. Preliminary engagement activities

Preliminary engagement activities include following activities: -

- (A) Performing procedures regarding the continuance of the client relationship
- (B) Evaluating compliance with ethical requirements, including independence
- (C) Establishing an understanding of terms of engagement

Performing preliminary engagement activities assists auditor in identifying and evaluating events or circumstances that may affect auditor's ability to plan and perform audit engagement.

4. Sample audit programme pertaining to purchases

Name of Concern	:	Broad Industries
Financial Year	:	20XX-XX
Prepared by	:	Name of person with date

Reviewed by : Name of person with date

Approved by : Name of person with date

S.no.	Nature of Procedure	Extent of Check	Basis of Sample	Done by
(a)	Vouch few purchase invoices of paper from purchase records of concern.			
(b)	Trace these invoices into account books of concern.			
(c)	Verify few purchase invoices of paper on GST portal.			
(d)	Trace few purchase invoices of paper in stock records to ensure that these have been added to stocks of raw material.			

5. There is a possibility that planned audit procedures may not achieve desired result and fail to detect misstatements in revenue recognition. Such a risk is referred to as "detection risk".

SA 200 defines detection risk as the risk that the procedures performed by the auditor to reduce audit risk to an acceptably low level will not detect a misstatement that exists and that could be material, either individually or when aggregated with other misstatements.

For example, auditor of a company uses certain audit procedures for the purpose of obtaining audit evidence and reducing audit risk, but still there will remain a risk that audit procedures used by the auditor may not be able to detect a misstatement which by nature is material, then that risk is known as detection Risk.

Detection risk comprises sampling and non-sampling risk.

- (a) **Sampling risk** is the risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure. It simply

means that the sample was not representative of the population from which it was chosen.

- (b) **Non-sampling risk** is the risk that the auditor reaches an erroneous conclusion for any reason not related to sampling risk. Like an auditor may reach an erroneous conclusion due to application to some inappropriate audit procedure.

6. IT related risks can have an impact on audit in different ways discussed as under: -

Impact on substantive checking

Inability to address IT risks may lead to non-reliance of data obtained from systems. In such a case, all information, data, and reports would have to be tested thoroughly for their completeness and accuracy. It could lead to increased substantive checking i.e. detailed checking.

Impact on controls

It can lead to non-reliance on automated controls, system calculations and accounting procedures built into applications. It may result in additional audit work.

Impact on reporting

Due to regulatory requirements in respect of internal financial controls in case of companies, it may lead to modification of auditor's report in some instances.

7. Audit Procedure:

Inspection involves examining records or documents, whether internal or external, in paper form, electronic form, or other media, or a physical examination of an asset. In view of above, it can be concluded that CA Kanika used Inspection as an audit procedure.

Inspection of records and documents provides audit evidence of varying degrees of reliability, depending on their nature and source and, in the case of internal records and documents, on the effectiveness of the controls over their production.

Example of inspection used as a test of controls is inspection of records for evidence of authorisation.

Some documents represent direct audit evidence of the existence of an asset, for example, a document constituting a financial instrument such as a inventory or bond. Inspection of such documents may not necessarily provide audit evidence about ownership or value. In addition, inspecting an executed contract may provide audit evidence relevant to the entity's application of accounting policies, such as revenue recognition. Inspection of tangible assets may provide reliable audit evidence with respect to their existence, but not necessarily about the entity's rights and obligations or the valuation of the assets. Inspection of individual inventory items may accompany the observation of inventory counting.

8. When using external confirmation procedures, the auditor shall maintain control over external confirmation requests, including:
- (a) Determining the information to be confirmed or requested;
 - (b) Selecting the appropriate confirming party;
 - (c) Designing the confirmation requests, including determining that requests are properly addressed and contain return information for responses to be sent directly to the auditor; and
 - (d) Sending the requests, including follow-up requests when applicable, to the confirming party.

In the given case, it appears that external auditor has delegated entire work of sending out external confirmation requests to internal audit department over which he has no control. Further, responses to external confirmation requests are received on mail id of internal audit department. All these acts are not in line with requirements under SA 505.

9. **Audit Procedure Regarding Opening Balances:** The newly appointed auditor of BTN Ltd shall read the most recent financial statements, if any, and the predecessor auditor's report thereon, if any, for information relevant to opening balances, including disclosures.

The auditor of BTN Ltd shall obtain sufficient appropriate audit evidence about whether the opening balances contain misstatements that materially affect the current period's financial statements by:

- (1) Determining whether the prior period's closing balances have been correctly brought forward to the current period or, when appropriate, any adjustments have been disclosed as prior period items in the current year's Statement of Profit and Loss.
 - (2) Determining whether the opening balances reflect the application of appropriate accounting policies; and
 - (3) Performing one or more of the following:
 - (i) Where the prior year financial statements were audited, perusing the copies of the audited financial statements including the other relevant documents relating to the prior period financial statements.
 - (ii) Evaluating whether audit procedures performed in the current period provide evidence relevant to the opening balances; or
 - (iii) Performing specific audit procedures to obtain evidence regarding the opening balances.
- 10.** Circumstances when it becomes necessary to meet with company's external legal counsel:

In the given case of SPR Ltd., Auditor requested the management for meeting with SPR's external legal counsel.

In certain circumstances, the auditor also may judge it necessary to meet with the entity's external legal counsel to discuss the likely outcome of the litigation or claims.

This may be the case, **for example**, where:

- (i) The auditor determines that the matter is a significant risk.
- (ii) The matter is complex.
- (iii) There is disagreement between management and the entity's external legal counsel.

Ordinarily, such meetings require management's permission and are held with a representative of management in attendance.

11. Disclosure in case of Benami Properties held by the Company: Where any proceedings have been initiated or pending against the company for holding any benami property under the relevant law relating to prohibition of such transactions, the company shall disclose the following: -

- (a) Details of such property, including year of acquisition
- (b) Amount thereof
- (c) Details of Beneficiaries
- (d) If property is not in the books, then the fact shall be stated with reasons
- (e) Where there are proceedings against the company under this law as an abettor of the transaction or as the transferor, then the details shall be provided
- (f) Nature of proceedings, status of same and company's view on same.

12. (i) The type of credit facilities referred to in above situation given by banks to meet working capital requirements of business which are repayable on demand are known as "cash credit facilities/overdraft" facilities. The amount of ₹1.85 crores outstanding as on 31st March, 2023 reflects borrowings of the company and it would be classified as "short-term borrowings" as loans repayable on demand from banks under current liabilities in balance sheet of the company. Borrowings shall further be subclassified as secured.

(ii) Specific disclosure requirements of short-term borrowings under Schedule III to Companies Act, 2013 in given situation are as under: -

- Nature of security i.e. primary security of current assets and collateral security of residential house belonging to a director shall be specified.

- As loans have been guaranteed by directors, the aggregate amount of such loans shall be disclosed.

To be disclosed as Additional Regulatory Information

Since the Company has borrowings from bank on the basis of security of current assets, it shall also disclose the following:-

- whether quarterly returns or statements of current assets filed by the Company with banks or financial institutions are in agreement with the books of accounts.
 - if not, summary of reconciliation and reasons of material discrepancies, if any to be adequately disclosed.
- 13.** The disclosure given in the question does not meet requirements of Schedule III to Companies Act, 2013.

Schedule III requires that the company shall explain the items included in numerator and denominator for computing the ratios. Further explanation shall be provided for any change in the ratio by more than 25% as compared to the preceding year.

In the given table, the company has not explained the items included in numerator and denominator for computing ratios. Further, variations in ratios as compared to preceding year are as under: -

Name of ratio	31.3.23	31.3.22	Variation
Current ratio	2.50	2.30	8.69%
Inventory turnover ratio	3.00	6.00	50%
Trade receivables turnover ratio	1.75	5.00	65%
Net Profit ratio (in%)	13%	10%	30%

As calculated above, there is change in inventory turnover ratio, trade receivables turnover ratio and net profit ratio by more than 25% as compared to preceding year. Therefore, explanations for such changes have also to be provided where there are changes by more than 25% as compared to preceding year.

- 14.** SA 230 requires that the auditor shall prepare audit documentation on a timely basis. Preparing sufficient and appropriate audit documentation on a timely basis helps to enhance the quality of the audit and facilitates

the effective review and evaluation of the audit evidence obtained and conclusions reached before the auditor's report is finalized.

SQC 1, however, requires auditor to complete assembly of final audit file in ordinarily not more than 60 days after the date of the auditor's report. The completion of the assembly of the final audit file after the date of the auditor's report is only an administrative process that does not involve the performance of new audit procedures or the drawing of new conclusions.

Therefore, auditor shall prepare documentation on a timely basis. However, for completion of assembly of final audit file which is an administrative process, time period of 60 days after the date of auditor's report has been required in SQC 1.

- 15.** Completion memorandum is a summary that describes the significant matters identified during the audit and how they were addressed.

Such a summary may facilitate effective and efficient review and inspection of the audit documentation, particularly for large and complex audits. Further, the preparation of such a summary may assist auditor's consideration of the significant matters. It may also help the auditor to consider whether there is any individual relevant SA objective that the auditor cannot achieve that would prevent the auditor from achieving the overall objectives of the auditor.

- 16.** In the given situation, a huge fire had broken out in one of plants of company on 25th June, 2023 destroying substantial part of machinery and work-in-process resulting in loss of ₹ 5 crores. The auditor has yet to sign audit report.

Before signing audit report, he should perform following audit procedures to obtain sufficient appropriate audit evidence that all such events have been identified and are appropriately reflected in financial statements: -

- Inquiry of management whether any subsequent events have occurred
- Reading minutes of the meetings of owners, management that have been held after date of financial statements and inquiring about

matters discussed at such meetings for which minutes are not available

- Reading entity's latest subsequent interim financial statements
- Obtaining Written representations from management in accordance with SA 580

The situation is an example of subsequent event occurring between date of financial statements and date of audit report requiring disclosure in financial statements. The auditor has a responsibility to obtain sufficient appropriate audit evidence whether such an event requiring disclosure in financial statements is appropriately reflected in financial statements.

17. In the given situation, the engagement partner has asked for a cash flow forecast from management for next twelve months from date of financial statements. The audit procedures are also nearing completion.

Therefore, purpose of engagement partner in requiring a cash flow forecast is to obtain sufficient appropriate audit evidence regarding and to conclude on appropriateness of management's use of going concern basis of accounting in preparation of its financial statements. Further, his purpose is also to conclude on basis of audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast a significant doubt on ability of entity to continue as a going concern, and to report in accordance with SA 570.

The significance of testing going concern assumption is due to its effect on preparation of financial statements. When the use of going concern is considered as appropriate, assets and liabilities are recorded on the basis that entity will be able to realize its assets and discharge liabilities in normal course of business. In case it is not so viewed, financial statements are prepared on liquidation basis. Hence, testing such an assumption provides evidence to auditor whether use of such assumption is appropriate or not.

Two audit procedures in relation to cash flow forecast likely to be performed

- Evaluate reliability of underlying data generated to prepare the forecast

- Determine whether there is adequate support for assumptions underlying the forecast

18. Examples of circumstances to include Emphasis of Matter Paragraph:

As per SA 706 (Revised) on "Emphasis of Matter Paragraphs and Other Matter Paragraphs In The Independent Auditor's Report", the examples of circumstances where the auditor may consider it necessary to include an Emphasis of Matter paragraph are: -

- (a) An uncertainty relating to the future outcome of an exceptional litigation or regulatory action.
- (b) A significant subsequent event that occurs between the date of the financial statements and the date of the auditor's report.
- (c) Early application (where permitted) of a new accounting standard that has a material effect on the financial statements.
- (d) A major catastrophe that has had, or continues to have, a significant effect on the entity's financial position.

19. In the given case, auditor has not been able to obtain sufficient appropriate audit evidence relating to inventories, debtors, creditors, revenues and expenses. The matter was brought to the knowledge of management but no result has been achieved. In such circumstances, auditor should proceed as given here under: -

If the auditor concludes that the possible effects on the financial statements of undetected misstatements, if any, could be both material and pervasive so that a qualification of the opinion would be inadequate to communicate the gravity of the situation, the auditor shall:

- (i) Withdraw from the audit, where practicable and possible under applicable law or regulation; or
- (ii) If withdrawal from the audit before issuing the auditor's report is not practicable or possible, disclaim an opinion on the financial statements.

If auditor withdraws from such an engagement, before withdrawing, auditor shall communicate to those charged with governance any

matters regarding misstatements identified during the audit that would have given rise to a modification of the opinion.

- 20.** Pilfering is one of the greatest problems in any hotel and the importance of internal control cannot be undermined. It is the responsibility of management to introduce controls which will minimize the leakage as far as possible. Evidence of their success is provided by the preparation of regular perhaps weekly, trading accounts for each sales point and a detailed scrutiny of the resulting profit percentages, with any deviation from the anticipated form being investigated. The auditor should obtain these regular trading accounts for the period under review, examine them and obtain explanations for any apparent deviations.

The auditor should verify a few restaurant bills by reference to K.O.T.s (Kitchen Order Tickets) or basic record. This would enable the auditor to ensure that controls regarding revenue cycle are in order.

The auditor should satisfy himself that all taxes collected from occupants on food and occupation have been paid over to the proper authorities. If the internal control in a hotel is weak or perhaps breaks down, then a very serious problem exists for the auditor. As a result of the transient nature of many of his clients' records, the auditor must rely to a very large extent on the gross margin shown by the accounts. As a result, the scope of his audit tests will necessarily be increased and, in the event of a material margin discrepancy being unexplained, he will have to consider qualifying his audit report.

21. Accounting treatment

Operating lease is generally treated like a renting arrangement. Lease payments are treated as operating expenses and asset does not appear as asset in lessee's balance sheet. Finance lease is treated like a loan arrangement. Hence, asset ownership is considered of that of lessee and thus appears on the balance sheet of the lessee.

Tax benefits

Operating lease payment is considered like an expense just as in case of renting. However, no depreciation can be claimed by lessee. In case of

finance lease, lessee can claim both interest and depreciation as it is treated like a loan.

- 22.** RBI norms stipulate that if any advance account becomes NPA as at close of any year, the entire interest accrued or credited to income account in past periods should be reversed or provided for, if the same is not realized.

Further, in respect of NPAs, fees, commission and other 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.

In the given case, account has turned Sub-standard asset which is a type of NPA. Therefore, auditor should make compliance of above norms relating to income recognition.

- 23.** The provision for advances falling in D1 category is required @ 25% of secured portion and 100% of unsecured portion. Therefore, provision in above case is arrived as under: -

Outstanding balance as on 31.3.23	50 lakhs
Less: Value of security	40 lakhs

Unsecured portion	10 lakhs

Therefore, outstanding balance of ₹ 50 lakhs is secured to the tune of ₹40 lakhs and balance ₹ 10 lakhs is unsecured.

Provision calculation

25% of secured part	i.e., 25% of ₹ 40 lakhs	₹ 10 lakhs
100% of unsecured part	i.e., 100% of ₹ 10 lakhs	₹ 10 lakhs

Required provision		₹ 20 lakhs

Therefore, provision made by branch is not proper. It should have made provision of ₹20 lakhs instead of ₹ 7.50 lakhs.

- 24.** SA 210 deals with the auditor's responsibilities in agreeing the terms of the audit engagement with management and, where appropriate, those charged with governance. This includes establishing that certain preconditions for an audit, responsibility for which rests with management and, where appropriate, those with governance, are present.

The objective of the auditor is to accept or continue an audit engagement only when the basis upon which it is to be performed has been agreed, through:

- (A) Establishing whether the preconditions for an audit are present and
- (B) Confirming that there is a common understanding between the auditor and management and, where appropriate, those charged with governance of the terms of the audit engagement.

One of the preconditions for an audit is to obtain the agreement of management that it acknowledges and understands its responsibility for preparation of financial statements and for such internal control as is necessary to enable preparation of financial statements that are free from material misstatements.

In the given situation, CA X is insisting only upon obtaining agreement of management regarding acknowledgment of its responsibility for internal control to enable preparation of financial statements that are free from material misstatements in accordance with SA 210. Design, implementation and maintenance of internal control to ensure preparation of reliable financial statements that are free from material misstatements is management's responsibility. He is insisting on obtaining agreement of management regarding acknowledgment of its responsibility. Therefore, CA X's view is proper.

In case management does not provide such agreement acknowledging its responsibility, the auditor shall not accept proposed audit engagement unless required by law or regulation.

- 25.** Audit quality is essential to maintain confidence in the independent assurance provided by the auditors. It is responsibility of auditor to maintain high audit quality. SQC 1 and SA 220 both deal with quality control. SQC 1 applies to entire firm. However, SA 220 applies to a particular audit engagement.

Based upon quality control system of firm established in accordance with requirements of SQC 1, quality control policies pertaining to audit engagements are decided by engagement teams. Engagement partner of a team is responsible for quality control procedures of a particular audit engagement in accordance with SA 220.

Therefore, SA 220 is premised on the basis that the firm is subject to SQC 1. Within the context of the firm's system of quality control, engagement teams have a responsibility to implement quality control procedures that are applicable to the audit engagement.

Note: Students are also advised to refer RTP of Paper-2: Corporate and Other Laws for academic updates relating to Company Law and Other Laws.



PAPER – 6: FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT

6A: FINANCIAL MANAGEMENT



QUESTIONS

Division A: Case Scenario

Working Capital

1. ArMore LLP is a newly established startup dealing in manufacture of a revolutionary product HDHMR which is a substitute to conventional wood and plywood. It is an economical substitute for manufacture of furniture and home furnishing. It has been asked by a venture capitalist for an estimated amount of funds required for setting up plant and also the amount of circulating capital required. A consultant hired by the entity has advised that the cost of setting up the plant would be ₹ 5 Crores and it will require 1 year to make the plant operational. The anticipated revenue and associated cost numbers are as follows:

Units to be sold = 3 lakh sq metres p.a.

Sale Price of each sq mtr = ₹ 1000

Raw Material cost = ₹ 200 per sq mtr

Labour cost = ₹ 50 per hour

Labour hours per sq mtr = 3 hours

Cash Manufacturing Overheads = ₹ 75 per machine hour

Machine hours per sq mtr = 2 hours

Selling and credit administration Overheads = ₹ 250 per sq mtr

Being a new product in the industry, the firm will have to give a longer credit period of 3 months to its customers. It will maintain a stock of raw material equal to 15% of annual consumption. Based on negotiation with the creditors, the payment period has been agreed to be 1 month from the date of purchase. The entity will hold finished goods equal to 2 months of units to be sold. All other expenses are to be paid one month in arrears. Cash and Bank balance to the tune of ₹ 25,00,000 is required to be maintained.

The entity is also considering reducing the working capital requirement by either of the two options: a) reducing the credit period to customers by a month which will lead to reduction in sales by 5%. b) Engaging with a factor for managing the receivables, who will charge a commission of 2% of invoice value and will also advance 65% of receivables @ 12% p.a. This will lead to savings in administration and bad debts cost to the extent of ₹ 20 lakhs and 16 lakhs respectively.

The entity is also considering funding a part of working capital by bank loan. For this purpose, bank has stipulated that it will grant 75% of net current assets as advance against working capital. The bank has quoted 16.5% rate of interest with a condition of opening a current account with it, which will require 10% of loan amount to be minimum average balance.

You being an finance manager, has been asked the following questions:

- (i) The anticipated profit before tax per annum after the plant is operational is
 - (A) 750 Lakhs
 - (B) 570 Lakhs
 - (C) 370 Lakhs
 - (D) 525 Lakhs
- (ii) The estimated current assets requirement in the first year of operation (debtors calculated at cost) is

- (A) 9,42,50,000
 - (B) 2,17,08,333
 - (C) 7,25,41,667
 - (D) 67,08,333
- (iii) The net working capital requirement for the first year of operation is
- (A) 9,42,50,000
 - (B) 2,17,08,333
 - (C) 7,25,41,667
 - (D) 67,08,333
- (iv) The annualised % cost of two options for reducing the working capital is
- (A) 18.18% and 16.92%
 - (B) 18.33% and 16.92%
 - (C) 18.59% and 18.33%
 - (D) 16.92% and 19.05%
- (v) What will be the Maximum Permissible Bank Finance by the bank and annualised % cost of the same?
- (A) 4,55,03,630 and 18.33%
 - (B) 5,44,06,250 and 18.33%
 - (C) 4,45,86,025 and 18.59%
 - (D) 3,45,89,020 and 19.85%

Division B: Descriptive Questions**Ratio Analysis**

1. From the following information and ratios, PREPARE the Balance Sheet as on 31st March 2023 and Income Statement for the year ended on that date for Limelite & Co.

Gross Profit	₹ 1,20,000
Shareholders' Funds	₹ 5,00,000
Gross Profit margin	40%
Net Profit Margin	10%
PBIT to PBT	2:1
Credit sales to Total sales	80%
Total Assets turnover	0.4 times
Inventory turnover (Use sales as turnover)	5 times
Average collection period (a 360 days year)	30 days
Current ratio	2
Operating expenses (excluding interest)	₹ 60,000
Long-term Debt to Equity	40%
Tax	Nil

Cost of Capital

2. Totto Ltd. has following capital structure as on 31st December 2023, which is considered to be optimum:

	(₹)
12% Debenture	4,50,000
10% Preference share capital	1,50,000
Equity shares capital (2,00,000 shares)	24,00,000

The company's share has a current market price of ₹ 30.25 per share. The expected dividend per share in next year is 50 percent of the 2023 EPS. The EPS of last 10 years is as follows. The past trends are expected to continue:

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EPS (₹)	1.180	1.311	1.456	1.616	1.794	1.99	2.209	2.452	2.723	3.023

The company can issue 14 percent new debenture and 12 percent new preference share. The company's debenture is currently selling at ₹ 99.

The new preference issue can be sold at a net price of ₹ 9.90, paying a dividend of ₹ 1.25 per share. The company's marginal tax rate is 50%.

- (i) CALCULATE the after-tax cost (a) of new debts and new preference share capital, (b) of ordinary equity, assuming new equity comes from retained earnings.
- (ii) CALCULATE the marginal cost of capital for the new funds raised.
- (iii) How much can be spent for capital investment before new ordinary share must be sold? Marginal cost of capital remains to be constant. (Assuming that retained earnings available for next year's investment is 50% of 2023 earnings.)
- (iv) What will be marginal cost of capital (cost of fund raised in excess of the amount calculated in part (iii) if the company can sell new ordinary shares of ₹ 22 per share? Assuming both the cost of debt and of preference share capital to be constant.

Capital Structure

3. Following data is available in respect of two companies having same business risk:

Capital employed = ₹ 3,00,000, EBIT = ₹ 45,000 and $K_e = 12.5\%$

Sources	A Ltd	B Ltd
	Levered Company (₹)	Unlevered Company (₹)
Debt (@10%)	1,50,000	Nil
Equity	1,50,000	3,00,000

An investor is holding 20% shares in levered company. CALCULATE the increase in annual earnings of investor if he switches his holding from Levered to Unlevered company.

Leverage

4. From the following financial data of Company A and Company B, PREPARE their Income Statements.

	Company A (₹)	Company B (₹)
Variable Cost	88,000	50% of sales

Fixed Cost	26,500	-
Interest Expenses	14,000	11,000
Financial Leverage	5 : 1	-
Margin of Safety	-	0.25
Income Tax Rate	30%	30%
EBIT	-	14,000

Investment Decisions

5. HMR Ltd. is considering replacing a manually operated old machine with a fully automatic new machine. The old machine had been fully depreciated for tax purpose but has a book value of ₹ 2,50,000 on 31st March. The machine has begun causing problems with breakdowns and it cannot fetch more than ₹ 40,000 if sold in the market at present. It will have no realizable value after 10 years. The company has been offered ₹ 1,50,000 for the old machine as a trade in on the new machine which has a price (before allowance for trade in) of ₹ 6,00,000. The expected life of new machine is 10 years with salvage value of ₹ 35,000.

Further, the company follows written down value method depreciation @ 10% but for tax purpose, straight line method depreciation is used considering that this is the only machine in the block of assets. A working capital of ₹ 50,000 will be needed and it will be released at the end of tenth year.

Given below are the expected sales and costs from both old and new machine:

	Old machine	New machine
Annual output	60,000 units	80,000 units
Selling price per unit	₹ 18	₹ 18
Annual operating hours	2,800	2,800
Material cost per unit	₹ 5	₹ 5
Labour cost per hour	₹ 50	₹ 75
Indirect cash cost per annum	₹ 1,00,000	₹ 1,75,000

From the above information, ANALYSE whether the old machine should be replaced or not if the opportunity cost of capital of the Company is 10%?

The Income tax rate is 30%. Further assume that book profit is treated as ordinary income for tax purpose.

Also ESTIMATE the internal rate of return of the replacement decision.

All calculations to be calculated to 3 decimal places.

Dividend Decision

6. MCO Ltd. has a paid-up share capital of ₹ 10,00,000, face value of ₹ 10 each. The current market price of the shares is ₹20 each. The Board of Directors of the company has an agenda of meeting to pay a dividend of 25% to its shareholders. The company expects a net income of ₹ 5,20,000 at the end of the current financial year. Company also plans for a capital expenditure for the next financial year for a cost of ₹ 7,50,000, which can be financed through retained earnings and issue of new equity shares.

Company's desired rate of investment is 15%.

Required:

Following the Modigliani- Miller (MM) Hypothesis, DETERMINE value of the company when:

- (i) It does not pay dividend and
- (ii) It does pay dividend

Working Capital

7. PQ Ltd. has commenced new business segment in 2023-24. The following information has been ascertained for annual production of 25,000 units which is the full capacity.

	Cost per unit (₹)
Material	100
Labour and variable overhead expenses	50
Fixed manufacturing expenses	35
Depreciation	15
Selling expenses (80% variable)	10

In the first two years of operations, production and sales are expected to be as follows:

Year	Production (No. of units)	Sales (No. of units)
1	12,000	10,000
2	18,000	19,000

The selling price is expected to be ₹ 250.

To assess the working capital requirements, the following additional information is available:

- (a) Stock of materials 2 months' average consumption
- (b) Debtors 1.5 month's average sales.
- (c) Cash balance ₹ 50,000
- (d) Creditors for supply of materials 1 month's average purchase during the year.
- (e) Expenses All expenses will be paid 1 month in advance during the year.

Goods equal to 15% of the year's production (in terms of physical units) will be in process on the average requiring full materials but only 40% of the other expenses.

The management is also of the opinion to make 10% margin for contingencies on computed figure and value the closing stock at cost of production.

PREPARE, for the two years:

- (i) A projected statement of Profit/Loss (Ignoring taxation); and
- (ii) A projected statement of working capital requirements on a cash cost basis.

Miscellaneous

- 8. (i) EXPLAIN as to how the wealth maximisation objective is superior to the profit maximisation objective

- (ii) EXPLAIN the importance of trade credit and accruals as source of working capital. What is the cost of these sources?



SUGGESTED ANSWERS/HINTS

Division A: Case Scenario

1. (i) (A) 750 Lakhs

	Units	Per unit (₹)	Amount (₹)
Raw Material consumption	3,50,000	200	7,00,00,000
labour cost	3,50,000	150	5,25,00,000
Production Overheads	3,50,000	150	5,25,00,000
Cost of Production	3,50,000	500	17,50,00,000
Less: Stock of FG	50,000	500	2,50,00,000
COGS	3,00,000	500	15,00,00,000
Selling and admin exp	3,00,000	250	7,50,00,000
Cost of Sales	3,00,000	750	22,50,00,000
Sales	3,00,000	1000	30,00,00,000
Profit	3,00,000	250	7,50,00,000

Stock of FG (sq. mtr.) = $30,00,000 \times 2/12 = 50,000$

Units sold = 3,00,000

Raw material consumed (sq. mtr.) = 3,50,000

Raw Material Purchases = Consumption + RM stock (15%)
 $= 7,00,00,000 + 1,05,00,000$
 $= ₹ 8,05,00,000$

- (ii) (A) **9,42,50,000**

Stock of Raw Material (15% of 7,00,00,000) = 1,05,00,000

Stock of finished goods	= 2,50,00,000
Debtors (22,50,00,000 x 3/12)	= 5,62,50,000
Cash	= 25,00,000
Total Current Assets	= 9,42,50,000

(iii) (C) 7,25,41,667

Working Capital Statement

	Amount (₹)
Stock of Raw Material (15% of 7,00,00,000)	1,05,00,000
Stock of finished goods	2,50,00,000
Debtors (22,50,00,000 x 3/12)	5,62,50,000
Cash	25,00,000
Total Current Assets	9,42,50,000
Creditors (8,05,00,000 x 1/12)	67,08,333
O/s Exp (18,00,00,000 x 1/12)	1,50,00,000
Total Current Liabilities	2,17,08,333
Net Working Capital	7,25,41,667

(iv) (A) 18.18% and 16.92%

Cost reducing debtors credit period

Debtors credit period	= 2 months
Debtors balance	= 21,37,50,000 (2,85,000 units) x 2/12 = ₹3,56,25,000
Debtors credit period	= 3 months
Debtors balance	= 22,50,00,000 x 3/12 = ₹ 5,62,50,000
Amount released from debtors	= ₹ 2,06,25,000
reduction in profit (15,000 units x ₹ 250)	= ₹ 37,50,000
% p.a. cost (37,50,000/2,06,25,000)	= 18.18%

Costs of factoring

Commission (2% of 30 crores)	=	₹ 60,00,000
Interest (30cr x 65% x 12% x 3/12)	=	₹ 58,50,000
savings	=	₹ 36,00,000
Net cost of factoring	$\frac{82,50,000}{65\% \text{ of } 30\text{cr. i.e. } 19,50,00,000} \times \frac{12}{3}$	
	=	₹ 82,50,000
% p.a. cost	=	16.92%

(v) (B) 5,44,06,250 and 18.33%

Maximum Permissible Bank Finance = 75% of 7,25,41,667
= ₹ 5,44,06,250

Annualised cost of bank loan = 16.5/90% = 18.33%

Division A: Descriptive Questions

- Gross Profit = ₹ 1,20,000

Gross Profit Margin = 40%

∴ Sales = $\frac{\text{Gross Profit}}{\text{Gross Profit Margin}} = ₹ 1,20,000 / 0.40 = ₹ 3,00,000$

Net profit (PBT) = 3,00,000 x 10% = ₹ 30,000

PBIT/PBT = 2

PBIT = 2 x 30,000

PBIT = 60,000

Interest = 60,000 – 30,000 = ₹ 30,000

Credit Sales to Total Sales = 80%

∴ Credit Sales = ₹ 3,00,000 x 0.80 = ₹ 2,40,000

Total Assets Turnover = 0.4 times

∴ Total Assets = $\frac{\text{Sales}}{\text{Total Assets Turnover}}$

= $\frac{₹ 3,00,000}{0.4} = ₹ 7,50,000$

$$\begin{aligned}
 \text{Inventory turnover} &= 5 \text{ times} \\
 \text{Inventory} &= \frac{\text{Sales}}{\text{Inventory turnover}} = \frac{3,00,000}{5} = ₹ 60,000 \\
 \text{Average Collection Period} &= 30 \text{ days} \\
 \therefore \text{Debtors turnover} &= \frac{360}{\text{Average Collection Period}} = 360/30 = 12 \\
 \therefore \text{Debtors} &= \frac{\text{Credit Sales}}{\text{Debtors turnover}} = \frac{₹ 2,40,000}{12} = ₹ 20,000 \\
 \text{Current ratio} &= 2 \\
 2 &= \frac{\text{Debtors} + \text{Inventory} + \text{Cash (Current Assets)}}{\text{Creditors (Current Liabilities)}} \\
 2 \text{ Creditors} &= (₹ 20,000 + ₹ 60,000 + \text{Cash}) \\
 2 \text{ Creditors} &= ₹ 80,000 + \text{Cash} \text{ ----- (i)} \\
 \text{Long-term Debt to Equity} &= 40\% \\
 \text{Shareholders' Funds (Equity)} &= ₹ 5,00,000 \\
 \therefore \text{Long-term Debt} &= ₹ 5,00,000 \times 40\% = ₹ 2,00,000 \\
 \text{Creditors} &= \text{Total Assets} - (\text{Shareholder's fund} + \text{Long term debt}) \\
 &= ₹ 7,50,000 - (5,00,000 + 2,00,000) = ₹ 50,000 \\
 \therefore \text{Cash} &= (₹ 50,000 \times 2) - ₹ 80,000 = ₹ 20,000 \text{ [From equation (i)]}
 \end{aligned}$$

Income Statement

	(₹)
Sales	3,00,000
Less: Cost of Goods Sold	1,80,000
Gross Profit	1,20,000
Less: Operating Expenses	60,000
PBIT	60,000
Less: Interest	30,000
Net Profit	30,000

Balance Sheet

Liabilities	₹	Assets	₹
Equity share capital	5,00,000	Fixed asset (bal. fig.)	6,50,000
Long term debt	2,00,000	Current assets:	
Current liability	50,000	Stock 60,000	
		Receivables 20,000	
		Cash 20,000	1,00,000
	7,50,000		7,50,000

2. (i) Calculation of after-tax cost of the followings:

$$(a) \quad \text{New 14\% Debentures } (K_d) = \frac{I(1-t)}{NP} = \frac{₹ 14(1-0.5)}{₹ 99} \\ = 0.0707 \text{ or } 7.07\%$$

$$\text{New 12\% Preference Shares } (K_p) = \frac{PD}{NP} = \frac{₹ 1.25}{₹ 9.90} \\ = 0.1263 \text{ or } 12.63\%$$

Where,

I = Interest

t = Tax rate

PD = Preference dividend

NP = Net proceeds

$$(b) \quad \text{Equity Shares (Retained Earnings) } (K_e) \\ = \frac{\text{Expected dividend}(D_1)}{\text{Current market price}(P_0)} + \text{Growth rate}(G) \\ = \frac{50\% \text{ of } ₹ 3.023}{₹ 30.25} + 0.11^* = 0.16 \text{ or } 16\%$$

* Growth rate (on the basis of EPS) is calculated as below :

$$\frac{\text{EPS}_{\text{current year}} - \text{EPS}_{\text{previous year}}}{\text{EPS}_{\text{previous year}}} = \frac{\text{₹ } 3.023 - \text{₹ } 2.723}{\text{₹ } 2.723} = 0.11$$

(Students may verify the growth trend by applying the above formula to last three or four years. Growth Rate is rounded off)

(ii) Calculation of marginal cost of capital (on the basis of existing capital structure):

Source of capital	Weight (a)	After tax Cost of capital (%) (b)	WACC (%) (a) × (b)
14% Debenture	0.15	7.07	1.0605
12% Preference shares	0.05	12.63	0.6315
Equity shares	0.80	16.00	12.800
Marginal cost of capital			14.492

(iii) The company can spend for capital investment before issuing new equity shares and without increasing its marginal cost of capital:

Retained earnings can be available for capital investment

= 50% of 2023 EPS × equity shares outstanding

= 50% of ₹ 3.023 × 2,00,000 shares = ₹3,02,300

Since, marginal cost of capital is to be maintained at the current level i.e. 14.492%, the retained earnings should be equal to 80% of total additional capital for investment.

Thus, investment before issuing equity $\left(\frac{\text{₹ } 3,02,300}{80} \times 100 \right)$
= ₹ 3,77,875

The remaining capital of ₹ 75,575 i.e. ₹ 3,77,875– ₹ 3,02,300 shall be financed by issuing 14% Debenture and 12% preference shares in the ratio of 3 : 1 respectively.

(iv) If the company spends more than ₹ 3,77,875 as calculated in part (iii) above, it will have to issue new shares at ₹ 22 per share.

The cost of new issue of equity shares will be:

$$K_e = \frac{\text{Expected dividend}(D_1)}{\text{Current market price}(P_0)} + \text{Growth rate}(g) = \frac{50\% \text{ of } ₹ 3.023}{₹ 22} + 0.11$$

$$= 0.1787 \text{ or } 17.87\%$$

Calculation of marginal cost of capital (assuming the existing capital structure will be maintained):

Source of capital	Weight (a)	Cost (%) (b)	WACC (%) (a) × (b)
14% Debenture	0.15	7.07	1.0605
12% Preference shares	0.05	12.63	0.6315
Equity shares	0.80	17.87	14.296
Marginal cost of capital			15.988

3. (i)

Valuation of firms

Particulars	A Ltd	B Ltd
	Levered Firm (₹)	Unlevered Firm (₹)
EBIT	45,000	45,000
Less: Interest on debt (10% × ₹ 1,50,000)	15,000	Nil
Earnings available to Equity shareholders	30,000	45,000
Ke	12.5%	12.5%
Value of Equity (S) (Earnings available to Equity shareholders/Ke)	2,40,000	3,60,000
Debt (D)	1,50,000	Nil
Value of Firm (V) = S + D	3,90,000	3,60,000

Value of Levered company is more than that of unlevered company. Therefore, investor will sell his shares in levered company and buy shares in unlevered company. To maintain the

level of risk he will borrow proportionate amount and invest that amount also in shares of unlevered company.

(ii) Investment & Borrowings

	₹
Sell shares in Levered company ($₹ 2,40,000 \times 20\%$)	48,000
Borrow money ($₹ 1,50,000 \times 20\%$)	<u>30,000</u>
Buy shares in Unlevered company	<u>78,000</u>

(iii) Change in Return

	₹
Income from shares in Unlevered company ($₹ 78,000 \times 12.5\%$)	9,750
Less: Interest on loan ($₹ 30,000 \times 10\%$)	<u>3,000</u>
Net Income from unlevered firm	6,750
Less: Income from Levered firm ($₹ 48,000 \times 12.5\%$)	<u>6,000</u>
Incremental Income due to arbitrage	<u>750</u>

4. Income Statements of Company A and Company B

	Company A (₹)	Company B (₹)
Sales	1,32,000	1,12,000
Less: Variable cost	88,000	56,000
Contribution	44,000	56,000
Less: Fixed Cost	26,500	42,000
Earnings before interest and tax (EBIT)	17,500	14,000
Less: Interest	14,000	11,000
Earnings before tax (EBT)	3,500	3,000
Less: Tax @ 30%	1,050	900
Earnings after tax (EAT)	2,450	2,100

Working Notes:**Company A**

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

$$\text{So, } 5 = \frac{\text{EBIT}}{\text{EBIT} - 14,000}$$

$$\text{Or, } 5 (\text{EBIT} - 14,000) = \text{EBIT}$$

$$\text{Or, } 4 \text{ EBIT} = 70,000$$

$$\text{Or, EBIT} = ₹17,500$$

$$(ii) \text{ Contribution} = \text{EBIT} + \text{Fixed Cost} \\ = ₹ 17,500 + ₹ 26,500 = ₹ 44,000$$

$$(iii) \text{ Sales} = \text{Contribution} + \text{Variable cost} \\ = ₹ 44,000 + ₹ 88,000 \\ = ₹ 1,32,000$$

Company B

$$(i) \text{ Operating Leverage} = 1/\text{Margin of Safety} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$1/0.25 = \frac{\text{Contribution}}{₹ 14,000}$$

$$4 = \frac{\text{Contribution}}{₹ 14,000}$$

$$\text{Contribution} = ₹14,000 \times 4 = ₹56,000$$

$$(ii) \text{ Fixed Cost} = \text{Contribution} - \text{EBIT} = 56,000 - 14,000 = ₹ 42,000$$

$$(iii) \text{ Contribution} = 50\% \text{ of Sales (as Variable Cost is 50\% of Sales)}$$

$$\text{Sales} = 56,000 \times 2 = ₹1,12,000$$

5. Workings:

(i) Initial Cash Outflow:

	Amount (₹)
Cost of new machine	6,00,000
Less: Sale Price of existing machine	1,05,000
Net of Tax (₹ 1,50,000 × 0.70)	
	4,95,000

(ii) Terminal Cash Flows:

New Machine

	Amount (₹)
Salvage value of Machine	35,000
Less: Depreciated WDV {₹ 6,00,000 - (₹ 56,500 × 10 years)}	35,000
Short Term Capital Gain (STCG)	Nil
Tax	Nil
Net Salvage Value (cash flows)	35,000

(iii) Computation of additional cash flows (yearly)

Particulars	Existing machine	New Machine	Incremental
(1)	(2)	(3)	(4)=(3)–(2)
Annual output	60,000 units	80,000 units	20,000 units
	₹	₹	₹
(A) Sales revenue @ ₹ 18 per unit	10,80,000	14,40,000	3,60,000
(B) Less: Cost of Operation			
Material @ ₹ 5 per unit	3,00,000	4,00,000	1,00,000
Labour			

Old = 2,800 x ₹ 50	1,40,000		70,000
New = 2,800 x ₹ 75		2,10,000	
Indirect cash cost	1,00,000	1,75,000	75,000
Total Cost (B)	5,40,000	7,85,000	2,45,000
Profit Before Tax and depreciation (PBTB) (A – B)	5,40,000	6,55,000	1,15,000
Less: Depreciation $\left(\frac{6,00,000 - 35,000}{10}\right)$			56,500
Earning after depreciation before Tax			58,500
Less: Tax @30%			17,550
Earning after depreciation and Tax			40,950
Add: Depreciation			56,500
Net Cash inflow			97,450

Analysis: Since the Incremental Cash flow is positive, the old machine should be replaced.

Note: As mentioned in the question WDV of Machine is zero for tax purpose hence no depreciation shall be provided in existing machine.

(iv) Calculation of IRR

Computation of NPV @ 10%

	Period	Cash flow (₹)	PVF @ 10%	PV (₹)
Incremental cash flows	1-10	97,450	6.144	5,98,733
Add: Release of Working Capital	10	50,000	0.386	19,300
Add: Terminal year cash	10	35,000	0.386	13,510

				6,31,543
Less: Initial cash outflow	0	4,95,000	1	4,95,000
Less: Working capital	0	50,000	1	50,000
			NPV	86,543

Since NPV computed in Part (i) is positive. Let us discount cash flows at higher rate say at 20%

	Period	Cash flow (₹)	PVF @ 20%	PV (₹)
Incremental cash flows	1-10	97,450	4.192	4,08,510
Add: Release of Working Capital	10	50,000	0.162	8,100
Add: Terminal year cash	10	35,000	0.162	5,670
				4,22,280
Less: Initial cash outflow	0	4,95,000	1	4,95,000
Less: Working capital	0	50,000	1	50,000
			NPV	(1,22,720)

Now we use interpolation formula:

$$10\% + \frac{86,543}{86,543 - (-1,22,720)} \times 10\%$$

$$10\% + \frac{86,543}{2,09,263} \times 10\%$$

$$\text{IRR} = 10\% + 4.14\% = 14.14\%$$

Summary of Results

		Decision
Incremental Cash Flow	₹ 97,450	Accept
IRR	14.14% > Cost of Capital (10%)	Accept

6. As per MM Hypothesis, value of firm/ company is calculated as below:

$$V_f \text{ or } nP_0 = \frac{(n + \Delta n)P_1 - I + E}{(1 + K_e)}$$

Where,

- V_f = Value of firm in the beginning of the period
 n = number of shares in the beginning of the period
 Δn = number of shares issued to raise the funds required
 I = Amount required for investment
 E = total earnings during the period

- (i) Value of the ZX Ltd. when dividends are not paid.

$$\begin{aligned} nP_0 &= \frac{(n + \Delta n)P_1 - I + E}{1 + K_e} \\ nP_0 &= \frac{\left(1,00,000 + \frac{2,30,000}{23}\right) \times ₹23 - ₹7,50,000 + ₹5,20,000}{(1 + 0.15)} \\ &= \frac{₹25,30,000 - ₹7,50,000 + ₹5,20,000}{(1 + 0.15)} = ₹20,00,000 \end{aligned}$$

Working notes:

1. Price of share at the end of the period (P_1)

$$P_0 = \frac{P_1 + D_1}{1 + K_e}$$

$$20 = \frac{P_1 + 0}{1 + 0.15} \quad \text{or, } P_1 = ₹23$$

2. Calculation of funds required for investment

Earnings	₹ 5,20,000
Dividend distributed	Nil

Fund available for investment	₹5,20,000
Total Investment	₹7,50,000
Balance Funds required	₹2,30,000

3. Calculation of no. of shares required to be issued for balance fund

$$\begin{aligned} \text{No. of shares } (\Delta n) &= \frac{\text{Funds required}}{\text{Price at end}(P_1)} = \frac{2,30,000}{23} \text{ shares} \\ &= 10,000 \text{ shares} \end{aligned}$$

(ii) **Value of the ZX Ltd. when dividends are paid.**

$$\begin{aligned} nP_0 &= \frac{(n + \Delta n)P_1 - I + E}{1 + K_e} \\ nP_0 &= \frac{\left(1,00,000 + \frac{4,80,000}{20.5}\right) \times ₹ 20.5 - ₹ 7,50,000 + ₹ 5,20,000}{(1 + 0.15)} \\ &= \frac{₹25,30,000 - ₹7,50,000 + ₹5,20,000}{(1 + 0.15)} = ₹20,00,000 \end{aligned}$$

Working notes:

4. Price of share at the end of the period (P_1)

$$\begin{aligned} P_0 &= \frac{P_1 + D_1}{1 + K_e} \\ 20 &= \frac{P_1 + 2.5}{1 + 0.15} \quad \text{or, } P_1 = ₹ 20.5 \end{aligned}$$

5. Calculation of funds required for investment

Earnings	₹ 5,20,000
Dividend distributed	₹ 2,50,000
Fund available for investment	₹ 2,70,000
Total Investment	₹ 7,50,000
Balance Funds required	₹ 4,80,000

6. Calculation of no. of shares required to be issued for balance fund

$$\text{No. of shares } (\Delta n) = \frac{\text{Funds required}}{\text{Price at end } (P_1)} = \frac{4,80,000}{20.5}$$

$$= 23,415 \text{ shares (approx.)}$$

Note- As per MM-hypothesis of dividend irrelevance, value of firm remains same irrespective of dividend paid. In the solution, there may be variation in value, which is due to rounding off error.

7. (i)

PQ Limited

Projected Statement of Profit / Loss

(Ignoring Taxation)

	Year 1	Year 2
Production (Units)	12,000	18,000
Sales (Units)	10,000	19,000
	(₹)	(₹)
Sales revenue (A) (Sales unit × ₹ 250)	25,00,000	47,50,000
Cost of production:		
Materials cost (Units produced × ₹ 100)	12,00,000	18,00,000
Direct labour and variable expenses (Units produced × ₹ 50)	6,00,000	9,00,000
Fixed manufacturing expenses (Production Capacity: 25,000 units × ₹ 35)	8,75,000	8,75,000
Depreciation (Production Capacity: 25,000 units × ₹ 15)	3,75,000	3,75,000
Gross Factory Cost	30,50,000	39,50,000
Add: Opening W.I.P.	-	2,91,000

Less: Closing W.I.P.	2,91,000	3,99,000
Cost of goods produced	27,59,000	38,42,000
Add: Opening stock of finished goods (Year 1 : Nil; Year 2 : 2,000 units)	-	4,59,833
Cost of Goods available for sale (Year 1: 12,000 units; Year 2: 20,000 units)	27,59,000	43,01,833
Less: Closing stock of finished goods at average cost (year 1: 2000 units, year 2 : 1000 units) (Cost of Production × Closing stock/ units produced)	4,59,833	2,13,444
Cost of Goods Sold	22,99,167	40,88,389
Add: Selling expenses – Variable (Sales unit × ₹ 8)	80,000	1,52,000
Add: Selling expenses -Fixed (25,000 units × ₹ 2)	50,000	50,000
Cost of Sales : (B)	24,29,167	42,90,389
Profit (+) / Loss (-): (A - B)	70,833	4,59,611

Working Notes:**Calculation of Stock of Work-in-progress**

Particulars	Year 1	Year 2
	(₹)	(₹)
Raw Material (material cost × 15%)	1,80,000	2,70,000
Labour & Mfg. Expenses (Labour & mfg. expenses × 15% × 40%)	88,500	1,06,500
Depreciation (Depreciation × 15% × 40%)	22,500	22,500
Total	2,91,000	3,99,000

1. Calculation of creditors for supply of materials:

	Year 1 (₹)	Year 2 (₹)
Materials consumed during the year	12,00,000	18,00,000
Add: Closing stock (2 month's average consumption)	<u>2,00,000</u>	<u>3,00,000</u>
	14,00,000	21,00,000
Less: Opening Stock	-	2,00,000
Purchases during the year	14,00,000	19,00,000
Average purchases per month (Creditors)	1,16,667	1,58,333

2. Prepayment for expenses:

	Year 1 (₹)	Year 2 (₹)
Direct labour and variable expenses	6,00,000	9,00,000
Fixed manufacturing expenses	8,75,000	8,75,000
Selling expenses (variable + fixed)	<u>1,30,000</u>	<u>2,02,000</u>
Total	16,05,000	19,77,000
Average per month	1,33,750	1,64,750

(ii) **Projected Statement of Working Capital Requirement (Cash Cost Basis)**

	Year 1 (₹)	Year 2 (₹)
(A) Current Assets		
Inventories:		
- Stock of Raw Material (12,000 units ₹ 100 2/12); (18,000 units ₹ 100 2/12)	2,00,000	3,00,000
- Finished Goods (Refer working note 3)	4,01,083	1,92,611
- Work In Process (Refer working note 5)	2,68,500	3,76,500

Receivables (Debtors) (Refer working note 4)	2,66,927	4,84,684
Prepayment for Expenses (Refer working note 2)	1,33,750	1,64,750
Minimum Cash balance	50,000	50,000
Total Current Assets/ Gross working capital (A)	13,20,260	15,68,545
(B) Current Liabilities		
Creditors for raw material (Refer working note 1)	1,16,667	1,58,333
Total Current Liabilities	1,16,667	1,58,333
Net Working Capital (A – B)	12,03,594	14,10,212
Add: 10% contingency margin	1,20,359	1,41,021
Total Working capital required	13,23,953	15,51,233

Working Note:
3. Cash Cost of Production:

	Year 1 (₹)	Year 2 (₹)
Gross Factory Cost as per projected Statement of P&L	30,50,000	39,50,000
Add: Opening W.I.P	-	2,68,500
Less: Closing W.I.P	2,68,500	3,76,500
Cost of goods produced	27,81,500	38,42,000
Less: Depreciation	(3,75,000)	(3,75,000)
Cash Cost of Production	24,06,500	34,67,000
Add: Opening Stock at Average Cost:	-	4,01,083
Cash Cost of Goods Available for sale	24,06,500	38,68,083
Less: Closing Stock at Avg. Cost	4,01,083	1,92,611

$\left(\frac{₹ 24,06,500 \times 2,000}{12,000} \right)$		
$\left(\frac{₹ 34,67,000 \times 1,000}{18,000} \right)$		
Cash Cost of Goods Sold	20,05,417	36,75,472

4. Receivables (Debtors)

	Year 1 (₹)	Year 2 (₹)
Cash Cost of Goods Sold	20,05,417	36,75,472
Add: Selling expenses – Variable (Sales unit × ₹ 8)	80,000	1,52,000
Add: Selling expenses -Fixed (25,000 units × ₹ 2)	50,000	50,000
Cash Cost of Debtors	21,35,417	38,77,472
Average Debtors	2,66,927	4,84,684

Calculation of Stock of Work-in-progress (Cash Cost Basis)

Particulars		(₹)
Raw Material (material cost × 15%)	1,80,000	2,70,000
Labour & Mfg. Expenses (Labour & mfg. expenses × 15% × 40%)	88,500	1,06,500
Total	2,68,500	3,76,500

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

- The maximisation of firm's profit.
- 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.

- (ii) Trade credit and accruals as source of working capital refers to credit facility given by suppliers of goods during the normal course of trade. It is a short-term source of finance. SSI firms in particular are heavily dependent on this source for financing their working capital needs. The major advantages of trade credit are – easy availability, flexibility and informality.

There can be an argument that trade credit is a cost-free source of finance. But it is not. It involves implicit cost. The supplier extending trade credit incurs cost in the form of opportunity cost of funds invested in trade receivables. Generally, the supplier passes on these costs to the buyer by increasing the price of the goods or alternatively by not extending cash discount facility.

6B: STRATEGIC MANAGEMENT**QUESTIONS****Multiple Choice Questions**

1. Swasthya, a rising star in India's dynamic healthcare sector, stands out as a prime example of smart strategic management.

At Swasthya, the compass guiding their endeavors is a compelling thought: to emerge as the finest healthcare provider renowned for delivering accessible, top-notch healthcare services. This overarching goal is not an isolated vision, but a thread woven into the very fabric of the organization, driving every facet of their operations. The people of the organization play a pivotal role in this journey. They are entrusted with translating this vision into tangible outcomes at the grassroots level, ensuring that local operations are aligned with the grand aspiration of becoming a healthcare leader.

Swasthya works meticulously towards optimizing each link of the patient experience. From streamlining appointment scheduling to expediting test result delivery, every facet of the healthcare journey is scrutinized. Swasthya's strategy is not merely about being a player in the market but about strategically positioning themselves as leaders. They proactively recognize the constant innovations that could disrupt their areas of expertise. To counter this, they introduced value-added offerings such as telemedicine and wellness programs. This addition not only mitigates the risk but also fortifies their long-term viability.

Beyond competition, ensuring the quality and safety of patient care is paramount at Swasthya. Stringent hygiene protocols, equipment maintenance regimens, and adherence to healthcare regulations form the cornerstone of their business. In parallel, the organization meticulously undertakes regular assessment as a central element of its decision-making apparatus. This forward-looking exercise encompasses

identifying and assessing potential risks such as regulatory changes, medical malpractice vulnerabilities, or shifts in market dynamics, all of which could have far-reaching consequences for their long-term objectives.

The implementation of Swasthya's strategy is steered by the McKinsey 7S model, which ensures a harmonious alignment of seven critical elements: strategy, structure, systems, shared values, skills, style, and staff. It emphasizes that the success of a long-term objective is contingent on the synchronization of these seven elements, reinforcing the idea that strategic management is not a compartmentalized process but a comprehensive activity.

Swasthya's strategic journey through India's healthcare landscape is a testament to the seamless integration of core management concepts, guiding its actions and strategies, while keeping the vision and intent at the core.

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

- (i) How does Swasthya's approach to premise control, including stringent hygiene protocols and equipment maintenance, contribute to their long-term objectives and which concept does it align with?
 - (a) It reduces immediate costs and aligns with strategic risk assessment.
 - (b) It safeguards quality and aligns with strategic risk assessment.
 - (c) It enhances immediate profitability and aligns with shared values.
 - (d) It streamlines administrative processes and aligns with value chain analysis.
- (ii) How does Swasthya counter the risk posed by constant innovations and disruptions in their areas of expertise?
 - (a) By aggressively acquiring innovative startups.

- (b) By introducing value-added services like telemedicine and wellness programs.
 - (c) By downsizing their operations.
 - (d) By focusing exclusively on urban healthcare markets.
- (iii) Why is the McKinsey 7S model significant in Swasthya's strategic management approach, and which elements of the model ensure a holistic alignment of their strategy?
- (a) It facilitates short-term profit maximization, with a focus on structure and style.
 - (b) It emphasizes a compartmentalized approach to strategy, focusing on shared values and skills.
 - (c) It ensures a comprehensive alignment of strategy, structure, systems, shared values, skills, style, and staff.
 - (d) It prioritizes immediate cost reduction by aligning systems and strategy.
- (iv) Why is the focus on local operations essential for Swasthya in the context of their long-term objective, and how does it contribute to their overall strategy?
- (a) It reduces strategic risk by minimizing the need for strategic risk assessment.
 - (b) It aligns with their commitment to immediate profitability.
 - (c) It translates the organization's vision into tangible outcomes and aligns with their long-term objective.
 - (d) It diversifies their portfolio and aligns with competitive landscape analysis.
- (v) The case talks about scrutiny of every facet of the healthcare journey and also emphasizes the fact that people of the organization play a pivotal role in this journey. Based on your reading, which level of management has the most crucial part to play here to ensure the sense of customer-first is imbibed in the organization?

- (a) Top Management (C-Suite) which sets the tone and strategy of the organization
 - (b) Middle Management (Divisional Managers) who have the responsibility of translating strategy to real-time objectives
 - (c) Functional Managers who actually do the work on the field
 - (d) Board of Directors who are responsible for wealth creation of the shareholders
2. ABC Foundation envisages a world where every individual, regardless of background, has access to quality education, eradicating illiteracy globally. ABC Foundation is committed to establishing 1000 learning centers, with a target to reach 1 million learners in the next five years. Their core values emphasize equality, empowerment, and knowledge-sharing. What represents the fundamental purpose and long-term aspirations of ABC Foundation?
- (a) Vision
 - (b) Values
 - (c) Mission
 - (d) Goals and Objectives
3. Kanika, known as "Desi Taylor Swift," launched the lipstick brand Kolor among intense global and domestic competition. Despite a lack of groundwork, her substantial 45 million social media following gained significant attention. Which aspect of Michael Porter's force multiplier is working in favour of Kolor?
- (a) Social Media Influence
 - (b) Threat of New Entrants
 - (c) Supplier Bargaining Power
 - (d) Buyer Bargaining Power
4. Mukul faced intense competition in an undifferentiated industry. To address this, he opted for a cost-cutting strategy to attract customers

- with lower pricing. Which factor could pose a risk to Mukul's cost-cutting strategy?
- (a) Prompt forecasting of demand for the product or service
 - (b) Investing in cost-saving technologies and using advanced technology for smart, efficient working
 - (c) Technological breakthroughs in the industry
 - (d) Resistance to differentiation until it becomes essential
5. Quntik operates in the software industry and enjoys a strong position in the market. They have identified an opportunity to acquire a smaller company to expand their product offerings. Which quadrant of Medelow's Matrix would the CEO of a smaller company fall into?
- (a) Keep Satisfied
 - (b) Key Player
 - (c) Low Priority
 - (d) Keep Informed
6. What organizational structure is best suited for House of Jani's strategic need for dynamic allocation of resources, ensuring each project and department is mentored, monitored, and maximized via multiple leaders?
- (a) Functional Structure
 - (b) Matrix Structure
 - (c) Hourglass Structure
 - (d) Network Structure

Descriptive Questions**Chapter 1-Introduction to Strategic Management**

7. ABC Pharmaceuticals, a leading pharmaceutical company, is in the process of formulating its strategic intent. The top management of ABC Pharmaceuticals wants to define the company's future direction, objectives, and goals. Their aim is to create a vision that sets the

organization apart and provides a roadmap for future growth. ABC Pharmaceuticals aspires to enrich the lives of people by producing high-quality pharmaceutical products at competitive prices and wants to become the world's leading pharmaceutical company by 2030." Based on this context, draft a vision and mission statement that could be formulated by the top management of ABC Pharmaceuticals.

8. Define Strategic Management. Also discuss the limitations of Strategic Management.

Chapter 2-Strategic Analysis: External Environment

9. Riya Sharma owns a confectionery business in Jaipur, specializing in homemade chocolates and candies. Despite holding a substantial market share in the central region, her business has experienced declining sales of these products over the last few years. Concerned about the market dynamics, Riya consults a management expert for guidance. The consultant recommends a comprehensive understanding of the competitive landscape. Explain the steps to be followed by Riya Sharma to understand the competitive landscape to address the sales decline.
10. Explain the concept of Experience Curve and highlight its relevance in strategic management.

Chapter 3-Strategic Analysis: Internal Environment

11. ABC Ltd. is a beverage manufacturing company. It chiefly manufactures soft drinks. The products are priced on the lower side, which has made the company a leader in the business. Currently it holds 35 percent of the market share. The R & D of the company developed a formula for manufacturing sugar-free beverages. On successful trial and approval by the competent authorities, the company was granted to manufacture sugar free beverages. This company is the pioneer to launch sugar free beverages which are sold at a relatively higher price. This new product has been accepted widely by a class of customers. These products have proved profitable for the company. Identify the strategy employed by the company ABC Ltd. and mention what measures could be adopted by the company to achieve the employed strategy.

12. There are four specific criteria of sustainable competitive advantage that firms can use to determine those capabilities that are known as core competencies. Explain.

Chapter 4-Strategic Choices

13. XYZ Corporation is a multinational conglomerate operating in various industries. They have a diverse portfolio of businesses, including a leading consumer electronics division, a growing e-commerce platform, a mature industrial machinery division, and a newly established software development unit. Which division of XYZ Corporation would most likely be classified as a "Star" in the BCG Growth-Share Matrix?
14. Justify the statement "Stability strategy is opposite of Expansion strategy".

Chapter 5-Strategy Implementation and Evaluation

15. York Investors, recognizing the importance of aligning its organizational elements with strategic objectives, has strategically invested in training programs, technology, and communication systems. The company aims to enhance the skills and capabilities of its workforce through comprehensive training initiatives. Simultaneously, York Investors leverages cutting-edge technology to streamline its operations and improve overall efficiency. The investment in communication systems ensures seamless collaboration and information flow across various departments. Identify and explain the model used by York Investors to achieve its strategic objectives.
16. Why is change management crucial during digital transformation, and what are some key strategies for navigating change effectively?

**SUGGESTED ANSWERS/HINTS**

1. (i) (b) (ii) (b) (iii) (c) (iv) (c) (v) (b)

2. (a)
3. (b)
4. (c)
5. (b)
6. (b)

7. ABC Pharmaceuticals may have following vision and mission:

Vision: Vision implies the blueprint of the company's future position. It describes where the organisation wants to land. ABC Pharmaceuticals may have vision "To be the globally recognized leader in pharmaceutical innovation and enriching the lives of people worldwide by providing high-quality, affordable, and accessible pharmaceutical products."

Mission: Mission delineates the firm's business, its goals and ways to reach the goals. It explains the reason for the existence of the firm in society. It is designed to help potential shareholders and investors understand the purpose of the company.

ABC Pharmaceuticals may identify mission in the following lines:

- To improve the well-being of individuals and communities by relentlessly pursuing excellence in pharmaceutical research, development, and manufacturing.
 - Committed to producing safe, effective, and sustainable medicines that address unmet medical needs and enhance the quality of life for patients.
 - Through innovation, collaboration, and ethical practices, we aim to make a positive impact on global healthcare and become the trusted partner of healthcare providers and patients alike.
8. The term '**strategic management**' refers to the managerial process of developing a strategic vision, setting objectives, crafting a strategy, implementing and evaluating the strategy, and initiating corrective adjustments were deemed appropriate.

The presence of strategic management cannot counter all hindrances and always achieve success as there are limitations attached to strategic management. These can be explained in the following lines:

- ♦ **Environment is highly complex and turbulent.** It is difficult to understand the complex environment and exactly pinpoint how it will shape-up in future. The organisational estimate about its future shape may awfully go wrong and jeopardise all strategic plans. The environment affects as the organisation has to deal with suppliers, customers, governments and other external factors.
- ♦ **Strategic Management is a time-consuming process.** Organisations spend a lot of time in preparing, communicating the strategies that may impede daily operations and negatively impact the routine business.
- ♦ **Strategic Management is a costly process.** Strategic management adds a lot of expenses to an organization. Expert strategic planners need to be engaged, efforts are made for analysis of external and internal environments, devise strategies and properly implement. These can be really costly for organisations with limited resources particularly when small and medium organisation create strategies to compete.
- ♦ **Competition is unpredictable.** In a competitive scenario, where all organisations are trying to move strategically, it is difficult to clearly estimate the competitive responses to the strategies.

9. Steps to understand the competitive landscape are as follows:

- (i) **Identify the competitor:** The first step to understanding the competitive landscape is to identify the competitors in the firm's industry and have actual data about their respective market share.
- (ii) **Understand the competitors:** Once the competitors have been identified, the strategist can use market research report, internet, newspapers, social media, industry reports, and various other sources to understand the products and services offered by them in different markets.
- (iii) **Determine the strengths of the competitors:** What is the strength

of the competitors? What do they do well? Do they offer great products? Do they utilize marketing in a way that comparatively reaches out to more consumers. Why do customers give them their business?

- (iv) **Determine the weaknesses of the competitors:** Weaknesses (and strengths) can be identified by going through consumer reports and reviews appearing in various media. After all, consumers are often willing to give their opinions, especially when the products or services are either great or very poor.
- (v) **Put all of the information together:** At this stage, the strategist should put together all information about competitors and draw inference about what they are not offering and what the firm can do to fill in the gaps. The strategist can also know the areas which need to be strengthened by the firm.

10. Experience curve akin to a learning curve which explains the efficiency increase gained by workers through repetitive productive work. Experience curve is based on the commonly observed phenomenon that unit costs decline as a firm accumulates experience in terms of a cumulative volume of production. It is based on the concept, "we learn as we grow".

The implication is that larger firms in an industry would tend to have lower unit costs as compared to those for smaller companies, thereby gaining a competitive cost advantage.

Experience curve results from a variety of factors such as learning effects, economies of scale, product redesign and technological improvements in production.

Experience curve has following features:

- ◆ As business organisation grow, they gain experience.
- ◆ Experience may provide an advantage over the competition. Experience is a key barrier to entry.
- ◆ Large and successful organisation possess stronger "experience effect".

A typical experience curve may be depicted as follows:

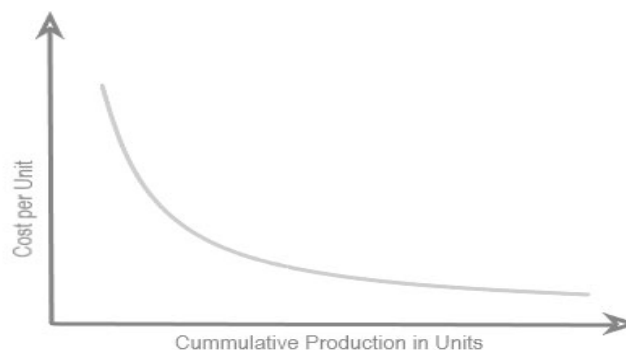


Figure: Experience curve

As a business grows, it understands the complexities and benefits from its experiences.

The concept of experience curve is relevant for a number of areas in strategic management. For instance, the experience curve is considered a barrier for new firms contemplating entry in an industry. It is also used to build market share and discourage competition.

11. According to Porter, strategies allow organizations to gain competitive advantage from three different bases: cost leadership, differentiation, and focus. Porter called these base generic strategies.

ABC Ltd. has opted for the Differentiation Strategy. The company has invested a huge amount in R & D and developed a formula for manufacturing sugar-free beverages to give the customer value and quality. They are **pioneers and serve specific customer needs that are not met by other companies** in the industry. The new product has been accepted by a class of customers. **Differentiated and unique sugar-free beverages** enable ABC Ltd. to charge **relatively higher** for its products, hence making higher profits and maintaining its competitive position in the market.

Sugar free beverage of ABC Ltd. is being accepted widely by a class of customers. Differentiation strategy is aimed at a broad mass market and involves the creation of a product or service that is perceived by the customers as unique. The uniqueness can be associated with product

design, brand image, features, technology, and dealer network or customer service.

Achieving Differentiation Strategy

To achieve differentiation, following strategies are generally adopted by an organization:

1. Offer utility to the customers and match products with their tastes and preferences.
 2. Elevate/Improve performance of the product.
 3. Offer a high-quality product/service for buyer satisfaction.
 4. Rapid product innovation to keep up with dynamic environment.
 5. Taking steps to enhance brand image and brand value.
 6. Fixing product prices based on the unique features of product and buying capacity of the customer.
- 12.** Four specific criteria of sustainable competitive advantage that firms can use to determine those capabilities that are core competencies. Capabilities that are valuable, rare, costly to imitate, and non-substitutable are core competencies.
- i. **Valuable:** Valuable capabilities are the ones that allow the firm to exploit opportunities or avert the threats in its external environment. A firm created value for customers by effectively using capabilities to exploit opportunities. Finance companies build a valuable competence in financial services. In addition, to make such competencies as financial services highly successful requires placing the right people in the right jobs. Human capital is important in creating value for customers.
 - ii. **Rare:** Core competencies are very rare capabilities and very few of the competitors possess these. Capabilities possessed by many rivals are unlikely to be sources of competitive advantage for any one of them. Competitive advantage results only when firms develop and exploit valuable capabilities that differ from those shared with competitors.

- iii. **Costly to imitate:** Costly to imitate means such capabilities that competing firms are unable to develop easily.
 - iv. **Non-substitutable:** Capabilities that do not have strategic equivalents are called non-substitutable capabilities. This final criterion for a capability to be a source of competitive advantage is that there must be no strategically equivalent valuable resources that are themselves either not rare or imitable.
13. In the BCG Growth-Share Matrix, divisions or business units are classified into four categories: Stars, Cash Cows, Question Marks, and Dogs. These classifications are based on a combination of market share and market growth rate.
- A "Star" in the BCG Matrix represents a business unit with a high market share in a high-growth market. In the scenario, the newly established software development unit would be classified as a "Star." The software development unit is described as "newly established," suggesting that it is operating in a high-growth market. Additionally, the potential for high market share can be inferred if the unit is strategically positioned to become a leader in the software development industry.
- Stars typically require significant investment to fuel their growth, but they have the potential to become future Cash Cows as the market matures. Therefore, the software development unit's high growth potential and the opportunity to capture a substantial market share align with the characteristics of a BCG Matrix "Star."
14. Stability Strategies, as the name suggests, are intended to safeguard the existing interests and strengths of business. It involves organisations pursuing established and tested objectives, continue on the chosen path, maintaining operational efficiency and so on. A stability strategy is pursued when a firm continues to serve in the same or similar markets and deals in the same products and services. In stability strategy, few functional changes are made in the products or markets, however, it is not a 'do nothing' strategy. This strategy is typical for mature business organizations. Some small organizations also frequently use stability as a strategic focus to maintain comfortable market or profit position.

On the other hand, expansion strategy is an aggressive strategy as it involves redefining the business by adding the scope of business substantially, increasing the efforts of the current business. In this sense, it becomes the opposite to stability strategy. Expansion is a promising and popular strategy that tends to be equated with dynamism, vigor, promise and success. Expansion also includes diversifying, acquiring and merging businesses. This strategy may take the enterprise along relatively unknown and risky paths, full of promises and pitfalls.

15. York Investors is employing the McKinsey 7S Model to achieve its strategic objectives. The model focuses on seven interdependent elements within an organization, categorized into "Hard Ss" and "Soft Ss." In this case:
- **Strategy (Hard S):** Investing in training programs and technology aligns with the strategic objective of enhancing workforce skills and operational efficiency.
 - **Structure (Hard S):** The investment suggests a structural alignment to support the strategic initiatives, indicating a deliberate organization of resources.
 - **Systems (Hard S):** The use of cutting-edge technology and communication systems reflects a commitment to optimizing daily tasks and improving overall efficiency, addressing the system component of the model.
 - **Shared Values (Soft S):** The emphasis on comprehensive training initiatives indicates a commitment to shared values, reflecting a focus on developing a skilled and capable workforce.
 - **Style (Soft S):** The leadership style is implied in the strategic decision to invest in technology and training for workforce development and operational efficiency.
 - **Staff (Soft S):** The commitment to enhancing skills and capabilities reflects a focus on the talent pool within the organization.
 - **Skills (Soft S):** The strategic investment in training programs directly addresses the development of key skills within the workforce.

York Investors' approach demonstrates a holistic application of the McKinsey 7S Model, emphasizing the interconnectedness of both hard and soft elements to achieve strategic alignment and organizational effectiveness.

16. Change management is essential during digital transformation to ensure the success of the process. Here are some key strategies to navigate change effectively:

- **Specify the digital transformation's aims and objectives:** Clearly defining the intended outcomes and objectives helps ensure everyone is aligned and working towards the same goals.
- **Always communicate:** Regular and transparent communication is crucial to help people understand the goals of digital transformation and how it will impact various stakeholders, including employees, clients, and other parties.
- **Be ready for resistance:** Change, even if beneficial, can be met with resistance. Having a strategy in place to address resistance is important for overcoming challenges and ensuring a smooth transition.
- **Implement changes gradually:** Instead of making all changes at once, gradual implementation allows individuals to adapt to new ways of doing things without feeling overwhelmed by too much change simultaneously.
- **Offer assistance and training:** Providing support, guidance, and training for employees is crucial as they navigate new procedures, software applications, and other aspects of digital transformation.

In conclusion, meticulous planning and effective change management are vital for the successful completion of digital transformation projects. Without proper change management, these efforts are more likely to fail, and organizations can enhance the integration of new digital systems by anticipating and managing the necessary changes.