Time Allowed: 3 Hours | Full Marks: 100

The figures in the margin on the right-hand side indicate full marks.
Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.
All working notes should form part of your answer.

Answer Question No.1 in Section A which is compulsory.
Further answer any five from question no. 2 to question No. 8 in Section B.
The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

Answer all the questions. Each question carries two marks.

1. Choose the correct option from the given alternatives: [15 × 2 = 30]

(i) _____ are set of standards for a company's behavior used by a socially conscious investor to screen potential investments in the company

(a) Environment
(b) Social
(c) Governance
(d) All of the above

(ii) Following are not within the scope of Management Accounting

(a) Financial Accounting
(b) Cost Accounting
(c) Tax Accounting
(d) None of the above

(iii) In Activity Based Costing, Production Manager's Salary is a _____ level activity:

(a) Unit
(b) Batch
(c) Product
(d) Facility

(iv) M Ltd., using Activity Based Costing (ABC), manufactures two types of products - P and Q respectively. During a period, the company incurred Rs. 1,00,000 as inspection cost and it worked for 20 and 30 production runs respectively for producing product P and Q. The inspection cost for product P under ABC System was _____

(a) ₹20,000
(b) ₹30,000
(c) ₹40,000
(d) ₹50,000

(v) M/s Super Trust Limited presently manufactures 5,000 units of a product at ₹ 10 each. The Company received an offer from a potential customer for 1,000 units of the same product. If the revised cost of production per unit is reduced to ₹ 9, what will be the minimum selling price per unit?

(a) ₹4.50
(b) ₹5.00
(c) ₹4.00
(d) ₹3.00

(vi) M/s Ahmed Corporation produces 5000 units of a particular product and sold 4000 units @ ₹20 each. If variable overheads and fixed overheads recovery rate is @ ₹10 & ₹3 respectively, profit of M/s Ahmed Corporation under Marginal costing and Absorption costing are:

(a) ₹ 28,000 & ₹ 28,000
(b) ₹ 25,000 & ₹ 28,000
(c) ₹ 40,000 & ₹ 25,000
(d) ₹ 28,000 & ₹ 40,000

(vii) Mr. Akash Sharma has the following two options:

Particulars	Old Car	New Car
Fixed cost	₹ 80,000	₹ 1,30,000
Variable cost per km.	₹ 10	₹ 8

The Indifference Point is:

(a) 20,000 Km
(b) 25,000 Km
(c) 16,250 Km
(d) 8,000 Km

(viii) Division – A of Pharma Limited can sell 1900 units of its finished goods in open market at a selling price of ₹ 30 per unit. The production capacity of Division – A is 2000 units, variable cost per unit is ₹ 10 and fixed cost per unit is ₹ 7. Division – B of Pharma Limited requires 600 units of the same finished goods produced by Division – A. The Transfer price of Division – A is _____.

(a) ₹ 32.00
(b) ₹ 23.33
(c) ₹ 26.67
(d) ₹ 25.00

(ix) Standard material requires for 1 unit of finished goods is 5000 Kgs @ ₹ 10. If actual material required for 1 unit of finished goods is 6000 Kgs @ ₹ 12 and also 1000 Kgs @ ₹ 20 ordered on emergency basis by the production manager, the Material Price Variance is:

(a) ₹ 12,000 (Adverse)
(b) ₹ 22,000 (Adverse)
(c) ₹ 14,000 (Adverse)
(d) ₹ 42,000 (Adverse)

(x) **During March 2026, 27,000 direct labour hours were worked at an actual cost of ₹2,36,385 and the standard direct labour hours of production were 29,880. The standard direct labour cost per hour was ₹.8.50. What was the labour efficiency variance?**

(a) **₹17,595 (A)**
(b) **₹17,595 (F)**
(c) **₹24,480 (A)**
(d) **₹24,480 (F)**

(xi) **A _____ is a budget which is continuously updated by adding a further accounting period when the earlier accounting period has expired.**

(a) **Zero Base Budgeting**
(b) **Rolling Budget**
(c) **Continuous Budget**
(d) **Programme Budget**

(xii) **If Risk free rate of return is 10%, nifty rate of return is 14% and Beta factor of last five years are 0.68, 0.74, 1.20, 1.35 & 1.55, then Cost of Equity is:**

(a) **15.20%**
(b) **16.20%**
(c) **21.70%**
(d) **15.50%**

(xiii) **Responsibility Accounting is also known as _____ Accounting.**

(a) **Profitability**
(b) **Performance**
(c) **Financial**
(d) **Activity**

(xiv) **_____ is based on the principle of insufficient reason.**

(a) **The Minimax (Maximin) Criterion**
(b) **The Laplace Criterion**
(c) **The Savage Criterion**
(d) **The Hurwicz Criretion**

(xv) **Situation where a decision maker knows all of the possible outcomes of a decision and also knows the probability associated with each outcome is referred to as:**

(a) **Certainty**
(b) **Risk**
(c) **Uncertainty**
(d) **Strategy**

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
d	d	d	c	c	b	b	c	c	d	b	b	b	b	b

Section – B

Answer any Five Questions from Question No. 2 to Question No. 8.

Each Question carries 14 Marks. **[5 × 14 = 70]**

2. (a) **"The Management Accountant is responsible for the installation, development and efficient functioning of the Management Accounting System" – In this context, Explain the functions of Management Accountant.** **[7]**

(b) **M/s Veeera Limited produces two products – Apple Cola and Orange Cola. Cost details of the above two products for the year ended 31-03-2025 is as under:**

Particulars	Apple Cola	Orange Cola
No. of units sold	1,50,000 Bottles	2,00,000 Bottles
Selling price per unit (₹)	45.00	40.00
Direct Material cost per unit (₹)	7.50	5.00
Direct Labour cost per unit (₹)	4.00	4.00
Direct Labour hours per unit	4 Minutes	2.50 Minutes
Machine Hours per unit	2 Minutes	1.50 Minutes

Overhead cost during the period is as under:

Particulars	Amount (₹)
Factory overheads	5,00,000
Cost of material handling	2,00,000
Purchase related cost	3,00,000
Storage expenses	4,00,000
Packaging cost	7,00,000
Delivery related cost	4,00,000
Total cost	25,00,000

The cost drivers for the above overhead cost areas under:

Overheads	Cost drivers
Factory overheads	Machine Hours
Cost of material handling	800 units of material handled. 450 units for Apple Cola & 350 units for Orange Cola
Purchase related cost	300 Purchase Orde₹ 175 Purchase Orders for Apple Cola & 125 Purchase Orders for Orange Cola
Storage expenses	2000 units of material storage. 1200 units for Apple Cola & remaining for Orange Cola
Packaging cost	3,50,000 Bottles
Delivery related cost	Direct labour hours

Required:

Calculate Total Cost and Profit per unit of both the products under:

(i) Traditional method of charging overheads based on Machine hour rate

(ii) Activity based Costing method. **[7]**

Answers:

(a) The functions of a Management Account are appended below :

i. Planning and Accounting – Management accountants prepare an accounting system covering costs, sales forecasts, profit planning, production planning, and allocation of resources.

ii. Controlling – Management accountants assist in the control of an organisation's performance through the use of standard costing, budget control, accounting ratios, funds flow statement, Cost – cutting initiatives, and assessing capital expenditure proposals and returns on investment.

iii. Reporting – Management accountants assist the top management in finding out the root cause of an un favourable operation or event by identifying the real reasons for the adverse events as well as the responsible parties and comprehensively reporting them.

iv. Co-ordinating – Management accountants improve an organisation's efficiency and profit by providing various coordination tools such as budgeting, financial reporting, financial analysis and interpretation and so on.

v. Communication – Management accountants create a wide range of reports to communicate results to the superiors.

vi. Financial evaluation and Interpretation – Management accountant analyze the data and present it to the management in a non – technical approach, together with their comments and ideas, so that the shareholders and senior management can understand it and make informed decisions.

vii. Tax Administration– Management are in charge of tax policies and processes. They make the reports that are required by various authorities.

viii. Evaluation of External effects – There may be changes in government policy and existing laws. These amendments and policy changes can affect business goals.

ix. Economics appraisal – When the government make regular announcements about the country's economic situation, management accountants is entrusted with making the economic study and determine the influence of current economic conditions on the company's operations.

x. Asset Protection – Management accountants separate fixed asset registers for each type and provide internal checks and control to protect the company's assets.

(b)

Cost and Profit Statement under Traditional Costing Method		
Particulars	**Apple Cola**	**Orange Cola**
No. of units sold	1,50,000 Bottles	2,00,000 Bottles
Direct material cost (₹)	11,25,000	10,00,000
Direct labour cost (₹)	6,00,000	8,00,000
Prime Cost (₹)	17,25,000	18,00,000
Machine hours required	5,000 Hours (1,50,000 units x 2 Min) / 60 Min	5,000 Hours (2,00,000 units x 1.5 Min) / 60 Min
Overhead Cost (₹)	12,50,000	12,50,000
	25,00,000 / 10,000 x 5,000	25,00,000 / 10,000 x 5,000
Total Cost (₹)	29,75,000	30,50,000
Total Cost per unit (₹) (B)	**19.83** **(Total cost / No. of units sold)**	**15.25** **(Total cost / No. of units sold)**
Selling price per unit (₹) (A)	**45.00**	**40.00**
Profit per unit (₹) (A-B)	**25.17**	**24.75**

Cost and Profit Statement under Activity Based Costing Method		
Particulars	**Apple Cola**	**Orange Cola**
No. of units sold	1,50,000 Bottles	2,00,000 Bottles
Direct material cost (₹)	11,25,000	10,00,000
Direct labour cost (₹)	6,00,000	8,00,000
Prime Cost (₹)	17,25,000	18,00,000
Overhead Cost **(WN-1)**	**12,95,700**	**12,04,300**
Total Cost (₹)	30,20,700	30,04,300
Total Cost per unit (₹) (B)	**20.14**	**15.02**
Selling price per unit (₹) (A)	**45.00**	**40.00**
Profit per unit (₹)	**24.86**	**24.98**

WN-1

Calculation of Rate per Cost Driver:

Rate per cost driver				
Activity	**Cost Pool (₹) (A)**	**Cost drivers**	**No. of Cost drivers (B)**	**Rate per cost drivers (₹) [A / B]**
Factory overheads	500000	Machine Hours	10000	50
Cost of material handling	200000	Material handled	800	250
Purchase related cost	300000	Purchase Orders	300	1000
Storage expenses	400000	Material storage	2000	200
Packaging cost	700000	No. of Bottles	350000	2
Delivery related cost	400000	Direct labour hours	18,333 (150000 x 4 + 200000 x 2.5) 60	21.82

Calculation of Overhead cost under Activity Based Costing method		
Particulars	**Apple Cola**	**Orange Cola**
Factory overhead	250000	250000
	(5000 x 50)	(5000 x 50)
Cost of material handling	112500	87500
	(450 x 250)	(350 x 250)
Purchase related cost	175000	125000
	(175 x 1000)	(125 x 1000)
Storage expenses	240000	160000
	(1200 x 200)	(800 x 200)
Packaging cost	300000	400000
	(150000 x 2)	(200000 x 2)
Delivery related cost	2,18,200	1,81,800
	(10000 x 21.82)	(8,333 x 21.82)
Total overhead cost	**12,95,700**	**12,04,300**

3. (a) **M/s UTZ Ltd. manufactures 20,000 units of 'X' in a year at its normal production capacity. The unit cost as to variable costs and fixed costs at this level are ₹13 and ₹4 respectively.**

Due to trade depression, it is expected that only 2,000 units of 'X' can be sold during the next year. The management plans to shut-down the plant. The fixed costs for the next year then is expected to be reduced to ₹33,000. Additional costs of plant shut-down are expected at ₹12,000. Analyse whether the plant should be shut down or not. What is the shutdown point? You may assume a selling price of ₹20 per unit. **[7]**

(b) **M/s Neelam Limited is engaged in manufacturing and selling clothing material. One of its division is Design division which provides design consultancy to production division as well as to external clients. The Design division is always working in team of three designers on each day of consultancy assignment. The external clients are charged at the rate of ₹ 9,000/- for each consulting day, which is cost plus 25% profit margin. 80% of cost of consultation charges is variable and balance 20% is fixed. The production division received an outside order which requires 2 consulting teams to work for 5 days in a week for one year. If consultancy services provided internally, there is a scope of reduction of variable cost of design division by ₹ 500 per consulting day.**

You are required to calculate the Transfer Price per consulting day at which design division can provide consultancy services to production division so that overall profit of M/s Neelam Limited is maximized in each of the following scenario:

(i) **All the teams of Design division are fully engaged during the one-year period in providing consultancy services to external clients and the division has no spare capacity of consulting team to take up the work of production division.**

(ii) **Design division will be able to spare one design team of consultant to provide service to the production division during the one-year period and all other team will be fully engaged in providing services to external division.**

(iii) **A new external client has offered to pay ₹ 33,28,000 to the Design division for engaging services of two teams of consultant during the aforesaid period of one year.** **[7]**

Answers:

(a) **Statement of cost for taking a decision about shut-down of plant:**

	Plant is operated ₹	Plant is shut down ₹
Variable Cost	26,000	-
	(2,000 units × ₹13)	
Fixed Costs	80,000	33,000
	(20,000 units × ₹4)	(unescapable cost)
Additional shut down cost	-	12,000
Total Cost	1,06,000	45,000
State of loss:		

Sales	40,000	
	(2,000 units × ₹20)	
Less: Total Cost	1,06,000	45,000
(as above)		
Loss	-66,000	-45,000
	(if continued)	(if shut-down)

Recommendation: A comparison of loss figures indicated as above points out, that loss is reduced if the plant is shut-down. In fact by doing so the concern's loss would be reduced by (₹21,000).

$$\text{Shut-down point} = \frac{\text{Total fixed cost} + \text{Shut down costs}}{\text{Contribution per unit}}$$

$$= \frac{\text{Rs.80,000} + \text{Rs.45,000}}{\text{Rs.20} - \text{Rs.13}}$$

= 5,000 units

(b) WN-1 Calculation of Contribution per team day:

Selling Price per team day = ₹9,000/-

Total cost per team day = ₹7,200/- (9,000 / 125 x 100)

Therefore, Variable Cost per team day = ₹5,760/- (7,200 x 80%)

Contribution per team day = ₹3,240/- (9,000 – 5,760)

WN-2 Calculation of requirement of Production division:

One year = 52 weeks.

Therefore, production division required 2 consulting teams for five days in a week for 52 weeks.

Therefore, No. of consulting team day = 2 team days x 5 days x 52 weeks

= 520 team days.

Scenario –(i)

Computation of Transfer Price per team day where there is no spare capacity:

Cost to be incurred = ₹5,760/-

Add: Contribution lost from external sales = ₹3,240/-

Less: Benefit earned if transfer to production division = ₹(-) 500/-

Transfer Price = ₹8,500/-

Scenario –(ii)

Computation of Transfer Price per team day where there is spare capacity in the design division:

Particulars	Spare capacity (1 team)	Fully engaged (1 team)

Cost to be incurred	5760	5760
Add: Contribution lost from external sales	0	3240
Less: Benefit earned if transfer to production division	500	500
Transfer price	**5260**	**8500**
Therefore, Weighted Average Transfer Price	**6880**	
	(5260 x 1 + 8500 x 1) / 2	

Scenario –(iii)

Computation of Transfer Price per team day where new external client has offered to pay ₹33,28,000 to the Design division:

Cost to be incurred = ₹5,760/-

Add: Contribution lost from new client = ₹640/- (₹33,28,000 / 520 - 5760)

Less: Benefit earned = ₹(-) 500/-

Transfer Price = ₹5,900/-

4. (a) M/s RSR Limited sold 15,000 units of product Zen in the month of August, 2025. The profitability statement for the month is as under:

Particulars	Amount (₹)	Amount (₹)
Sales		**12,00,000**
Variable Cost:		
Direct Material	**3,00,000**	
Direct Labour	**3,60,000**	
Production overhead	**1,50,000**	**8,10,000**
Fixed Cost:		
Fixed production overhead	**80,000**	
Fixed Administrative overhead	**70,000**	
Fixed Selling & Distribution overhead	**66,000**	**2,15,200**
Total Cost		**10,25,200**
Profit		**1,74,800**

After production of first 5000 units of product Zen, the company has to pay overtime allowance to the direct labours @ ₹9 per unit. The overtime allowance so paid has been included in the direct labour cost of ₹3,60,000 given in the above table.

You are required to calculate:

(i) Break Even Point (BEP)

(ii) Margin of Safety (MOS)

(iii) Profit from sale of 25,000 units of product Zen where fixed cost will increase by 10%. [7]

(b) M/s Beta Limited is engaged in manufacturing of Electrical Switchgear. Presently the company has supply order for 40,000 units of Electrical Switchgear in hand. Due to economic recession, no further orders are expected until April. Presently the company is working at 75% of its full capacity and the order in hand of 40,000 units represents one-month production at this activity level.

The Board of Directors of the company is currently considering the following two proposals:

(a) Operate at 75% activity level, complete the entire order of 40,000 units in January and shut down the factory in February & March.

(b) Operate at 25% activity level for each month of January, February & March.

The monthly cost sheet at different level of activity is as under:

Particulars	At 75% Activity level (₹)	At 25% Activity level (₹)	Idle (₹)
Direct Material	5,50,000	1,80,000	-
Direct Labour	4,90,000	1,65,000	-
Factory overheads:			
Indirect Material	48,000	18,000	-
Indirect Labour	1,10,000	38,000	6,000
Indirect Expenses:			
Repair & Maintenance	40,000	17,000	-
Other Expenses	55,000	30,000	16,000
Administrative overheads:			
Salaries & Allowances	1,50,000	1,00,000	65,000
Other Administrative overhead	32,000	24,000	8,000

M/s Beta Limited provides you the following additional information:

(i) Material and Labour cost will not be incurred when there is no production.

(ii) If proposal (b) above is opted, on reopening of the factory, one-time training cost of ₹ 75,000 and overhauling cost of Plant & Machinery of ₹ 17,000 would be required.

Required:

(i) Advice M/s Beta Limited purely on cost factors as to whether the factory should be shut down during February & March and complete the entire production of 40,000 units in January or operate at 25% activity level for the three months.

(ii) List out the non-cost factors in contrary to your decision in (i) above. [7]

Answers:

(a) WN-1 Calculation of normal wage rate:

Let normal wage rate = x

Therefore, 5000x +10000 (x + 9) = 3,60,000

or 5000x + 10000x + 90,000 = 3,60,000

or x = (3,60,000 – 90,000) / 15,000
or x = 18
Therefore, normal wage rate is ₹18 per unit

WN-2
Calculation of Contribution per unit:

Calculation of Contribution per unit		
Particulars	**First 5000 units**	**Balance 10000 units**
Selling price per unit (₹)	80	80
	(12,00,000 / 15,000)	(12,00,000 / 15,000)
Direct Material cost per unit (₹)	20	20
	(3,00,000 / 15,000)	(3,00,000 / 15,000)
Direct Labour cost per unit (₹)	18	27
	WN-1	(18+9)
Production overhead cost per unit (₹)	10	10
	(1,50,000 / 15,000)	(1,50,000 / 15,000)
Total variable cost per unit	48	57
Contribution per unit	**32**	**23**

(i) Calculation of Break Even Point (BEP):

We know that at BEP, Total Contribution = Total Fixed Cost
Contribution from first 5,000 units = ₹1,60,000 (5,000 x 32)
Total Fixed Cost = ₹2,15,200 (80,000 + 70,000 + 65,200)
Therefore, balance Fixed cost to be recovered by contribution to achieve BEP = 55,200 (2,15,200 – 1,60,000)
Contribution per unit after 5,000 units is ₹23
Therefore, additional units to be sold to recover balance Fixed Cost = 55,200 / 23
= 2400 unit.
Therefore, BEP = 5000 + 2400 = 7,400 units.

(ii) Calculation of Margin of Safety (MOS):
MOS = Actual sales – BEP Sales
15,000 – 7,400
7,600 units.

(iii) Profit from sale of 25,000 units:

Contribution from 25,000 units:	
First 5,000 units @ ₹32 per unit	= 1,60,000
Balance 20,000 units @ ₹23 per unit	= 4,60,000
Total Contribution	= 6,20,000
Less: Fixed Cost	= 2,36,720 (2,15,200 x 110%)
Profit	= 3,83,280 (6,20,000 – 2,36,720)

(b)

(i)

Financial comparison of two proposals		
Particulars	**Proposal – (a)** Operate at 75% activity level in Jan and shut down in Feb & March	**Proposal – (b)** Operate at 25% activity level in Jan, Feb & March
Direct Material	5,50,000	5,40,000
	-	(1,80,000 x 3)
Direct Labour	4,90,000	4,95,000
	-	(1,65,000 x 3)
Factory overheads:		
Indirect Material	48,000	54,000
	-	(18,000 x 3)
Indirect Labour	1,22,000	1,14,000
	(1,10,000 + 6000 x 2)	(38,000 x 3)
Indirect Expenses:		
Repair & Maintenance	40,000	51,000
	-	(17,000 x 3)
Other Expenses	87,000	90,000
	(55,000 + 16,000 x 2)	(30,000 x 3)
Administrative overheads:		
Salaries & Allowances	2,80,000	3,00,000
	(1,50,000 + 65000 x 2)	(1,00,000 x 3)

Other Administrative overhead	48,000	72,000
	(32,000 + 8,000 x 2)	(24,000 x 3)
One time training cost	75,000	0
Overhauling cost of Plant & Machinery	17,000	0
Total cost	**17,57,000**	**17,16,000**
Recommendation		**Better option**

(ii) Following are the two Non-financial factors which might be relevant for decision making:

- If the skilled workers are discharges due to temporary shutdown of factory for the two months, it may be difficult for the company to get back them when the factory is reopened. Getting skilled workers are not only difficult but also training cost for the workers may be high. Thus, it is advisable to continue the operation in all the three months.

- When the factory will be temporary closed for two months, the competitors may capture the market and the Company may loose a sizable market share on reopening the factory. To avoid this situation, the factory should not be closed in Feb & March.

5. (a) M/s Complete Solution is engaged in manufacturing gypsum false ceiling boards of standard size of 8 feet length x 4 feet width x ½ inch thickness. Following standards have been set for raw material to manufacture 2,00,000 square feet of false ceiling boards.

Direct Material	Qty.	Rate (₹)
Calcium Sulfate	**6,000 Kgs**	**300/-**
Chemical – A	**5,000 Liter**	**600/-**
Chemical – B	**7,000 Liter**	**800/-**

During November, 2025 actual material consumption are as under:

Direct Material	Qty.	Rate (₹)
Calcium Sulfate	**80,000 Kgs**	**310/-**
Chemical – A	**70,000 Liter**	**580/-**
Chemical – B	**86,000 Liter**	**820/-**

Actual production for the month of November, 2025 is 80,000 false ceiling boards of size 8 feet length x 4 feet width x ½ inch thickness.

Calculate the following:

(i) Material Cost Variance

(ii) Material Cost Variance sub-divided into (a) Price Variance & (b) Usage Variance. [7]

(b) Jai Hind Tilles Limited produces floor tiles. One of its product line is bathroom tiles of size length 6-inch x width 6-inch x 1/8-inch thickness. During the month of July, 25 the standard output is 20,000

sqft of floor tiles, 1/8-inch thickness. The standard cost and profit per unit for the month of July, 25 is as under:

Particulars	Amount (₹)
Direct Material	17.50
Direct Labour	4.00
Direct Expenses	2.00
Factory overhead:	
Variable production overhead	1.00
Fixed production overhead	0.75
Administrative overhead	0.50
Selling & Distribution overhead	0.25
Total cost	26.00
Profit	4.00
Selling price	30.00

The actual production and sales for the month of July, 25 is 70,000 units of floor tiles. Jai Hind Limited provides you the following additional details:

Particulars		Favorable (₹)	Adverse (₹)
Direct Material Variance	Price	15,000	-
	Usage	-	20,000
Direct Labour Variance	Rate	-	10,000
	Efficiency	17,000	-
Factory overhead variance	Variable - Expenditure	10,000	-
	Fixed - Expenditure	-	10,000
	Fixed - Volume	21,000	-
Administrative overhead variance	Fixed - Expenditure	15,000	-
	Fixed - Volume	-	9,000
Selling & Distribution overhead variance	Fixed - Expenditure	7,000	-
	Fixed - Volume	-	13,000

You are required to prepare:

(i) Profit & Loss statement showing the actual profit for the month of July, 25

(ii) Reconcile the actual profit with standard profit. **[7]**

Answers:

(a) WN-1

Calculation of standard quantity of false ceiling boards:

Standard quantity of false ceiling boards = Total area manufactured / Area of one false ceiling board

= 2,00,000 sqft / 32 sqft

= 6,250 false ceiling boards

Therefore, standard output = 6250 boards and actual output = 80,000 boards

WN-2

Calculation of standard quantity of raw material required for actual output:

Standard quantity of raw material required for actual output

= (Budgeted quantity of raw material / Budgeted output) x Actual output

Calcium Sulfate = (6,000 / 6,250) x 80,000 = 76,800 Kgs
Chemical – A = (5,000 / 6,250) x 80,000 = 64,000 Liters
Chemical – B = (7,000 / 6,250) X 80,000 = 89,600 Liters

WN-3

Data for Material Variances:

Budgeted				Standard (WN-2)			Actual		
Material	**Qty.**	**Rate (₹)**	**Amount (₹)**	**Qty.**	**Rate (₹)**	**Amount (₹)**	**Qty.**	**Rate (₹)**	**Amount (₹)**
Calcium Sulfate	6,000 Kgs	300	18,00,000	76,800 Kgs	300	2,30,40,000	80,000 Kgs	310	2,48,00,000
Chemical – A	5,000 Liters	600	30,00,000	64,000 Liters	600	3,84,00,000	70,000 Liters	580	4,06,00,000
Chemical – B	7,000 Liters	800	56,00,000	89,600 Liters	800	7,16,80,000	86,000 Liters	820	7,05,20,000
Total			**1,04,00,000**			**13,31,20,000**			**13,59,20,000**

Calculation of Material Variances:

(i) Material Cost Variance = Standard Cost – Actual Cost
13,31,20,000 – 13,59,20,000
₹28,00,000 (Adverse)

(ii) (a) Material Price Variance (MPV) = (Standard Rate – Actual Rate) x Actual Quantity

Calcium Sulfate = 8,00,000 (Adverse) [(300 – 310) x 80,000]
Chemical – A = 14,00,000 (Favorable) [(600 – 580) x 70,000]
Chemical – B = 17,20,000 (Adverse) [(800 – 820) x 86,000]
Total MPV = ₹11,20,000 (Adverse)

(ii) (a) Material Usage Variance (MUV) = (Standard qty. for actual output – Actual qty.) x Standard rate

Calcium Sulfate = 9,60,000 (Adverse) [(76,800 – 80,000) x 300]
Chemical – A = 36,00,000 (Adverse) [(64,000 – 70,000) x 600]
Chemical – B = 28,80,000 (Favorable) [(89,600 – 86,000) x 800]
Total MUV = ₹16,80,000 (Adverse)

(b) Calculation of standard output of floor tiles in numbers:

Total area of standard output / Area of one tiles

We know, 1 feet = 12 Inch

1 square feet = 144 square inch (12 inch x 12 inch)

Therefore, total area of standard output in sq-inch = 20,000 x 144 = 28,80,000 sq inch

Area of one floor tiles = 6 x 6 = 36 sq inch

Therefore, standard output of tiles = 28,80,000 / 36

= 80,000 tiles.

(i) Profit & Loss statement		
For the Month of July, 2025		
Particulars	**Amount (Rs.)**	**Amount (Rs.)**
Standard Direct Material cost	12,25,000	
	(70000 x 17.50)	
Add: Material Usage variance (A)	20,000	
Less: Material Price variance (F)	-15,000	**12,30,000**
Standard Direct Labour cost	2,80,000	
	(70,000 X 4)	
Add: Labour rate variance (A)	10,000	
Less: Labour Efficiency variance (F)	-17,000	**2,73,000**
Direct Expenses		**1,40,000**
		(70,000 x 2)
Prime Cost		**16,43,000**
Add: Factory overhead:		
Variable production overhead	70,000	
	(70,000 x 1)	
Less: Variable production overhead Exp. Variance (F)	-10,000	**60,000**
Fixed production overhead	52,500	
	(70,000 x 0.75)	
Add: Fixed production overhead Exp. Variance (A)	10,000	
Less: Fixed production overhead Vol Variance (F)	-21,000	**41,500**
Administrative overhead	35,000	
	(70,000 x 0.50)	
Add: Administrative overhead Vol variance (A)	9,000	

Less: Administrative overhead Exp. Variance (F)	-15,000	**29,000**
Selling & Distribution overhead	17,500	
	(70,000 x 0.25)	
Add: Selling & Distribution overhead Vol variance (A)	13,000	
Less: Selling & Distribution overhead Exp variance (F)	-7,000	**23,500**
Total Cost (B)		**17,97,000**
Sales (70000 x 30) (A)		21,00,000
Actual Profit (A-B)		**3,03,000**

(ii) Statement of Reconciliation between Standard profit & Actual profit

Particulars	**Amount (Rs.)**	**Amount (Rs.)**
Standard profit for actual output		2,80,000
		(70,000 x 4)
Add:		
Material Price variance (F)	15,000	
Labour Efficiency variance (F)	17,000	
Variable production overhead Exp. Variance (F)	10,000	
Fixed factory overhead Vol variance (F)	21,000	
Administrative overhead Exp. variance (F)	15,000	
Selling & Distribution overhead Exp. Variance (F)	7,000	85,000
		3,65,000
Less:		
Material Usage variance (A)	20,000	
Labour Rate variance (A)	10,000	
Fixed factory overhead Exp. variance (A)	10,000	
Administrative overhead Vol variance (A)	9,000	
Selling & Distribution overhead Vol Variance (A)	13,000	62,000
Actual Profit		**3,03,000**

6. (a) **M/s Alsto Limited manufactures plastic dustbins of 60-liters capacity. The selling price of dustbin is ₹ 100 per unit. Following are the Cost & Sales details during last two quarters:**

Particulars	Quarter - 1	Quarter - 2
Units Sold	6,500	5,800
Units produced	7,000	6,000
Direct Material:		
Raw Material - A	84,000	72,000
Raw Material - B	35,000	30,000
Direct Labour	1,80,000	1,65,000
Factory overhead	90,000	80,000
Administrative overhead	1,50,000	1,30,000

M/s Alsto Limited provided you the following additional information:

(i) The price of Raw Material – B will increase by 10% in the next quarter.

(ii) The direct labour cost will go up by 10% in the next quarter. Further, If production volume increases beyond 7500 units, overtime premium of 50% is also applicable on variable direct labour cost.

(iii) Fixed factory overhead & administrative overhead will increase by 10%.

(iv) A discount on selling price @ 20% to be given on all sales made at 8000 or more units of output.

(v) While operating at 8000 units production level, the company intends to quote for additional 2000 units to be supplied to local municipality under Swachha Bharat Mission. The working capital requirement for this order is 80% of sales value and target profit is 20% of Capital Employed in respect of this order.

Required:

(a) Prepare Flexible Budget for the next quarter at 7500 and 8000 units production level and determine profit at the respective level.

(b) Calculate the price to be quoted in respect of the municipality order of 2000 units of dustbins.

[7]

(b) **M/s Woody's produces and sells wooden furniture. One of its product line is Dinning Table. The projected sales for the quarter ending 31-03-2026 is 1200 pcs of Dinning Tables @ ₹ 5,000/- per unit. M/s Woody's provides you the following cost details per unit of Dinning Table:**

Particulars	Per unit of Dinning Table	Rate (₹)
Timber	1.50 cubic feet	₹ 500 / cft
6 mm Glass for table-top	12 sq feet	₹ 150 / sqft
Wood Glue	1/2 liter	₹ 400 / liter
Carpenters' time	180 Minutes	₹ 1000 / day of 8 hours

Planned Inventory level of M/s Woody's are as under:

Particulars	Timber (In cft)	Glass (In sqft)	Wood Glue (In liter)	Dining Table (In Pcs)
Opening	700	2000	50	50
Closing	900	1000	60	150

Fixed overhead would be ₹ 5,15,000 per month.

Required:

(i) Prepare Production and Raw Material Purchase Budget for the quarter ending 31-03-2026.

(ii) Calculate the Budgeted Net Profit for the quarter ending 31-03-2026. **[7]**

Answers:

(a) WN-1 Cost of Raw Material per unit:

Cost of Raw Material per unit = Change in total cost / Change in units

Raw Material – A = (84,000 – 72,000) / (7,000 – 6,000)

12,000 / 1,000 = ₹12/-

Raw Material – A = (35,000 – 30,000) / (7,000 – 6,000)

5,000 / 1,000 = ₹5/-

Price of Raw Material – B in the next quarter = 5 + 0.50 = ₹5.50

WN-2

Calculation of Variable & Fixed Direct labour cost:

Variable Cost per unit = Change in total cost / Change in units

(1,80,000 – 1,65,000) / (7,000 – 6,000)

15,000 / 1000

₹15/-

Total variable labour cost at 7000 units production = ₹1,05,000 (7,000 x 15)

Therefore, Fixed cost = ₹75,000 (1,80,000 – 1,05,000)

WN-3

Calculation of Variable Direct labour cost at 8000 units of production level:

(7500 units x 15 x 110% + 500 units x 16.50 x 150%)

1,23,750 + 12,375

1,36,125

WN-4

Calculation of Variable & Fixed Factory overhead:

Variable Cost per unit = Change in total cost / Change in units

(90,000 – 80,000) / (7,000 – 6,000)

10,000 / 1,000

Rs.10/-

Total variable factory overhead at 7000 units production = ₹70,000 (7,000 x 10)

Therefore, Fixed cost = ₹20,000/- (90,000 – 70,000)

Fixed factory overhead in the next quarter = ₹22,000 (20,000 + 2,000)

WN-5

Calculation of Variable & Fixed Administrative overhead:

Variable Cost per unit = Change in total cost / Change in units

(1,50,000 – 1,30,000) / (7,000 – 6,000)
20,000 / 1,000
Rs.20/-
Total variable administrative overhead at 7000 units production = ₹1,40,000 (7,000 x 20)
Therefore, Fixed cost = 10,000 (1,50,000 – 1,40,000)
Fixed administrative overhead in the next quarter = ₹11,000 (10,000 + 1000)

(i) Flexible Budget & Profit statement		
Particulars	**7500 Units**	**8000 Units**
Raw Material - A @ ₹12/- (WN-1)	90000	96000
Raw Material - B @ ₹5.50/- (WN-1)	41250	44000
Direct Labour - Variable	123750	136125
	(7500 units x Rs.16.50)	WN-3
Direct Labour - Fixed	82500	82500
	(75000 x 110%)	(75000 x 110%)
Factory overhead - Variable @ ₹10/-	75000	80000
Factory overhead -Fixed	22000	22000
	WN-4	WN-4
Administrative overhead- Variable @ ₹20/-	150000	160000
Administrative overhead- Fixed	11000	11000
	WN-5	WN-5
Total Cost	**5,95,500**	**6,31,625**
Sales (@ ₹100, ₹80)	7,50,000	6,40,000
	(7500 units x 100)	(8000 units x 80)
Profit	**1,54,500**	**8,375**

Note: As Direct labour cost will increase by 10%, the fixed portion of direct labour cost will also increase by 10%.

(ii) Calculation of Price to be quoted for Municipality order	
Particulars	**2000 units Amount (Rs.)**
Raw Material - A @ ₹12/- (WN-1)	24000

Raw Material - B @ ₹5.50/- (WN-1)	11000
Direct Labour - Variable @ ₹24.75 (15 x 110% x 150%)	49500
Factory overhead - Variable @ ₹10/-	20000
Administrative overhead- Variable @ ₹20/-	40000
Total Cost	144500
Add: Profit (₹1,44,500 / 84 x 16)	27524
Sale Price	172024
Selling Price per unit	**86.01**
Therefore, Price to be quoted for Municipality order	**86.01**

Note: As Fixed costs are already absorbed at 8000 units production level, no fixed cost to be charged for additional 2000 units to be sold to local municipality.

(b)

(i) Calculation of Production Budget and Raw Material Purchase Budget for the quarter ending 31-03-2026:

Production Budget of Dinning Table	
Particulars	**Units (Pcs)**
Projected Sales	1200
Add: Closing Stock	150
Less: Opening Stock	50
Budgeted Production	**1300**

Raw Material Purchase Budget (At production level of 1300 Pcs of Dinning Table)			
Particulars	**Timber (In cft)**	**Glass (In sqft)**	**Wood Glue (In Liter)**
Required for production	1950	15600	650
	(1300 x 1.50)	(1300 x 12)	(1300 x 1/2)
Add: Required Closing Stock	900	1000	60
Less: Opening Stock	700	2000	50

Budgeted Raw Material Purchase	**2150**	**14600**	**660**
Raw Material rate per unit (Rs.)	500	150	400
Budgeted Raw Material Cost (Rs.)	**10,75,000**	**21,90,000**	**2,64,000**
	(2150 x 500)	(14600 x 150)	(660 x 400)

(ii) Calculation of Budgeted Net Profit	
For the quarter ending 31-03-2026	
Particulars	**Amount (Rs.)**
Selling price per unit	5,000
Less: Variable Cost per unit (WN-1)	3,125
Contribution per unit (Sales – VC)	1,875
No. of units sold	1,200
Total Contribution	22,50,000
Less: Fixed cost (5,15,000 x 3 months)	15,45,000
Budgeted Profit	7,05,000
Budgeted Profit per unit (7,05,000 / 1200)	**587.50**

WN-1

Computation of Variable cost per unit	
Particulars	**Amount (Rs.)**
Timber (500 x 1.50)	750
Glass (150 x 12)	1800
Wood Glue (400 x 1/2)	200
Total Material Cost	2750
Add: Carpenters' Charges (₹1000 / 8 x 3)	375
Total Material Cost per unit	**3, 125**

7. (a) **The Balance Sheet of M/s ABC Limited as on 31-03-2025 is as under:**

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity Share Capital (@ ₹ 10 each)	10,00,000	Fixed Assets	25,00,000
Reserve & Surplus	12,00,000	Fixed Deposit at Bank	8,00,000
10% Debentures	7,00,000	Current Assets, Loans & Advances	7,00,000
12% Loan from Bank	5,00,000		
Current Liabilities & Provisions	6,00,000		
	40,00,000		40,00,000

Additional information:

(i) Tax rate applicable to the Company - 30%

(ii) Financial Leverage – 1.2 times

(iii) Return on Bank Fixed deposits – 8%

(iv) Return on Security market – 13%

(v) Average beta factor (β) of the Company for last five financial years is 0.80, whereas the highest & lowest beta factor (β) of last five financial years is 0.90 and 1.05 respectively. Assume Principle of Capital Asset Pricing Model (CAPM) holds good.

Required:

Calculate Economic Value Added (EVA) of M/s ABC Limited as on 31-03-2025 and comment on your answer. [7]

(b) **M/s Canework Self Help Group (SHG) is engaged in producing chairs made from cane. The production is purely carried by manual workers The SHG produces 2000 chairs in a month using 100% capacity utilization. The following information has been obtained from the cost records of M/s Canework Self Help Group (SHG):**

Particulars	Amount (₹)
Direct Material	₹ 800 Per Chair
Direct Labour	₹ 1000 Per day
Variable Overhead	₹ 300 Per Chair
Fixed Overhead at maximum capacity	₹ 2,60,000
Direct Labour hour per unit of production	2 Hours

Presently the SHG is working single shift from 10 am to 6 pm with 30 minutes' lunch break. Each chair requires 2 hours for the first 200 chairs It is possible to achieve 80% learning rate after production of first 200 chairs When 800 chairs are produced, the workers are more efficient and able to achieve 75% learning rate post 800 units, thereafter learning stops. Selling price of first 200 chairs are ₹ 3500 per unit.

Calculate the selling price per unit for an order of 1400 units for a prospective client, if M/s Canework intend to earn profit margin of 15% on cost. [7]

Answers:

(a) WN-1

Calculation of Capital Employed:

Particulars	Amount (In ₹)
Equity Share Capital	1000000
Reserve & Surplus	1200000
10% Debentures	700000
12% Loan from Bank	500000
Capital Employed	**34,00,000**

WN-2

Calculation of Cost of Debt (Post Tax):

Particulars	Amount (In ₹)
Interest on 10% Debenture (Rs. 7,00,000 x 10%)	70000
Interest on 12% Bank Loan (Rs. 5,00,000 x 12%)	60000
Total Interest	130000
Less: Tax Savings (Rs. 1,30,000 x 30%)	39000
Interest after tax savings	**91000**

Therefore, Cost of Debt post tax = (91,000 / 12,00,000) x 100 = 7.58%

WN-3

Calculation of Cost of Equity:

Cost of Equity = Risk free rate of return + β x (Market rate of return – Risk free rate of return)

According to Capital Asset Pricing Model (CAPM), beta (β) for calculation of EVA should be the highest of the given beta (β) for the last few years. Hence, beta (β) for calculation of EVA is 1.05.

Therefore, Cost of Equity = 8 + 1.05 x (13 – 8)

= 8 + 5.25

= 13.25%

WN-4

Calculation of Net Profit after Interest & Taxes:

Particulars	Amount (In ₹)
Interest on 10% Debenture (Rs. 7,00,000 x 10%)	70000
Interest on 12% Bank Loan (Rs. 5,00,000 x 12%)	60000
Total Interest	**130000**

Given Financial Leverage = 1.2

Financial Leverage = Profit before Interest & taxes (PBIT) / PBIT – Interest

1.2 = PBIT / PBIT – 1,30,000

1.2 PBIT - 1,56,000 = PBIT

0.2 PBIT = 1,56,000

PBIT = 1,56,000 / 0.20

PBIT = 7,80,000

Therefore, Profit after Interest but before tax = 6,50,000 (7,80,000 – 1,30,000)

Less: Tax @ 30% (6,50,000 x 30%) = 1,95,000

Therefore, Profit after Interest & taxes = 4,55,000

WN-5

Calculation of Weighted Average Cost of Capital (WACC):

WACC = Weight of Debt in the Capital Structure x Cost of Bond + Weight of Equity in the Capital Structure x Cost of Equity

{(12,00,000 / 34,00,000) x 7.58% + (22,00,000 / 34,00,000) x 13.25%}

= 2.67 + 8.57

= 11.24%

WN-6

Calculation Cost of Capital Employed:

Cost of Capital Employed = Capital Employed x Weighted Average Cost of Capital (WACC)

= 3400000 x 11.24%

= 3,82,160/-

Calculation of Economic VALUE Added (EVA):

Particulars	Amount (In ₹)
Net Operating Profit after Tax (NOPAT) (WN-4)	4,55,000
Add: Interest on debt net of tax savings (1,30,000 x 0.70)	91,000
Return to Providers of Fund	5,46,000
Less: Cost of Capital Employed (WN-6)	3,82,160
Economic Value Added (EVA)	**1,63,840**

Comment:

Positive EVA of Rs. 1,63,840 indicates that M/s Build Well Construction Limited exceeded the expectation of it's shareholders. It creates wealth for it's shareholders.

(b)

Computation of selling price per unit for an order of 1400 units		
Production (units)	200	1400
Incremental Labour hours **(WN-1)**	400	1136 (240+384+512)
Variable Cost:	**Amount (₹)**	**Amount (₹)**
Direct Material @ ₹800/unit	1,60,000	12,80,000
Direct Labour @ ₹125 / hour (1000 / 8)	50,000 (400 hours x Rs.125)	1,42,000 (1136 hours x ₹125)
Variable Overhead @ ₹300/unit	60,000	4,20,000
Total Variable Cost	2,70,000	18,42,000
Variable Cost Per Unit	1350	1315.71

Selling price = Variable cost per unit plus required profit margin.
Therefore, selling price per unit for executing order of 1400 units is ₹1315.71 x 115% = ₹1,513/-.
WN-1
Since each unit require 2 hours for first 200 units, learning starts after 200 units of production.

80% / 75% Learning Curve results are as follows:			
Cumulative Numbers	Hours per unit	Total labour hour	Incremental labour hour
200 units	2	400	400
400 units	1.60 (2 x 80%)	640	240
800 units	1.28 (1.60 x 80%)	1024	384
1600 units	0.96 (1.28 x 75%)	1536	512

8. (a) **M/s Global Healthcare Limited is considering to launch its revolutionized health care product for smokers The product is meant for avoiding smoking and can be launched through either of the three channels, Multispecialty Hospitals clinics, visiting doctors and advertisement campaigning. Sales are uncertain and fluctuate; demand could be low, medium or high. Expected sales (units) for the month of Feb, 2026 might be as follows:**

Sales Channel	Product Demand		
	Low	Medium	High
Multispecialty hospitals clinics	700	1800	3000
Visiting doctors	900	2400	2700
Advertisement campaigning	1200	1900	2300

M/s Global Healthcare Limited has determined the probabilities of product demand as under:
Low = 30%
Medium = 20%
High = 50%
The Selling Price per unit of the health care product is ₹ 1800/- and Variable cost per unit is 1300/-. The Company is considering to engage Medical Representatives (MR) based on the outcome of demand of its health care product. The cost of engagement of MR for Feb, 26 for visiting doctors is ₹ 1,30,000/-. The company has to offer a discount of 5% on selling price on products sales through Multispecialty Hospitals clinics. Cost of advertisement campaigning is ₹ 85,000/-
Apply the Decision Tree approach and advice M/s Global Healthcare Limited about the best sales channel to launch the product using Decision Tree approach and Profit statement. **[7]**

(b) **Name different types of Responsibly Centers. Briefly describe what factors distinguishes them from each other.** **[7]**

Answers:

(a)

Computation of Expected Value (EV)				
Sales Channel	**Demand**	**Probability**	**Sales (Units)**	**Expected Value (Units)**
Multispecialty hospitals clinics	Low	0.3	700	210
	Medium	0.2	1800	360
	High	0.5	3000	1500
Total Expected Value				**2070**
Visiting doctors	Low	0.3	900	270
	Medium	0.2	2400	480
	High	0.5	2700	1350
Total Expected Value				**2100**
Advertisement campaigning	Low	0.3	1200	360
	Medium	0.2	1900	380
	High	0.5	2300	1150
Total Expected Value				**1890**

Particulars	**Multispecialty hospitals clinics**	**Visiting doctors**	**Advertisement campaigning**
Expected Sales (Units)	2070	2100	1890
Selling Price per unit (Rs.)	1710	1800	1800
Variable Cost Per Unit (Rs.)	1300	1300	1300
Contribution per unit (Rs.)	410	500	500
Total Contribution (Rs.)	8,48,700	10,50,000	9,45,000
Cost of engagement of MR (Rs.)	1,30,000	0	0
Cost of advertisement campaigning (Rs.)	0	0	85,000
Profit (Rs.)	**7,18,700**	**10,50,000**	**8,60,000**

Recommendation: It is advised to launch the product through Visiting doctors.

(b) Responsibility Reports: The Responsibility accounting performance report is a budget that compares actual and budgeted accounts of controllable cost for a department and its managers.

Key elements that shall be included in a responsibility report include:

- Clearly defined responsibility center: The report should specify whether it's for a cost center, profit center, or investment center.
- Controllable revenues and costs: It only include revenues and expenses that the manager can control. Excluding uncontrollable items ensures fair performance evaluation.
- Budgeted vs. actual performance: Present side-by-side comparisons of actual results against budgeted or standard benchmarks to highlight variances.
- Variance analysis: Include interpretation for significant variances which help to identify operational issues or areas for improvement.
- Non-financial performance indicators (if applicable): Especially for service departments, include qualitative metrics (e.g., customer satisfaction, processing time).