

MANAGEMENT ACCOUNTING

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.*

SECTION-A (COMPULSORY)

1. Choose the correct option:

2×15=30

☒ Management Accounting can be viewed as

(A) Marketing-oriented Accounting ✗

☒ (B) Management-oriented Accounting

(C) Accounting-oriented Management

(D) Manager-oriented Accounting

☒ (ii) Management Accounting focused on reduction of waste of resources in production processes by elimination of "no-value activities" during the

(A) 1st Stage

(B) 2nd Stage

☒ (C) 3rd Stage

(D) 4th Stage

(iii) LPG Limited uses Activity Based Costing (ABC) system, produces three products i.e. L, P & G. Material handling & Inspection related cost for the period is ₹ 1,50,000 for 500 material moves & ₹ 90,000 for 300 inspection calls. Product P uses 40 material moves and 15 inspection calls during the period. Total overhead cost of Product-P under ABC system is:

(A) ₹ 15,000

(B) ₹ 17,000

(C) ₹ 14,500

☒ (D) ₹ 16,500

(iv) Which of the following independent activities is Value-Added or Non-Value Added?

I. Polishing of furniture used by a system engineer in a software firm.

II. Painting of pencils manufactured by a pencil factory.

(A) I - Value Added & II - Non-Value Added

(B) I & II both Non-Value Added

(C) I and II both Value Added

~~(D) I - Non-Value Added & II - Value Added~~

~~(v)~~ For the coming year, Mr. Dinesh has budgeted as under:

P/V Ratio = 45%, MOS = $1/3$ & Fixed Costs = ₹ 2,92,500

What is the total sales volume of Mr. Dinesh for the coming year?

(A) ₹ 15,75,000

~~(B) ₹ 9,75,000~~

(C) ₹ 11,25,000

~~(D) ₹ 8,50,000~~

(vi) DEF Limited has break-even when sales are ₹ 3,20,000 and variable costs at that level of sales are ₹ 2,00,000. How much would contribution increase or decrease if variable costs are dropped by ₹ 30,000?

(A) Increase by 25%

~~(B) Decrease by 25%~~

(C) Increase by 30%

(D) Decrease by 30%

- (xii) ABCA manufacturing company manufactures four products: E, F, G & H using the same raw materials. The input requirement for products E, F, G & H are 1 Kg, 2 Kgs, 5 Kgs & 7 Kgs respectively. Product-wise selling price and variable costs are given as under:

Products	E	F	G	H
Selling Price (₹)	100	150	200	300
Variable Costs (₹)	50	70	100	125

Assuming raw material availability is a limiting factor, the correct ranking of the products would be

- (A) E, F, G & H
~~(B) E, F, H & G~~
 (C) F, E, G & H
 (D) F, E, H & G

- ~~(xiii)~~ Which method of transfer pricing was introduced in order to overcome the problems caused by using marginal cost?

- (A) Dual Price
~~(B) Two-part Transfer Price~~
~~(C) Negotiated Transfer Price~~
 (D) Market Price Method

- (ix) ZED Limited sold 150 units of its product at selling price of ₹ 12 per unit. If budgeted sales for the period are 200 units at ₹ 10 each, Sales Price Variance is:

- (A) ₹ 200 (F)
~~(B) ₹ 300 (A)~~
 (C) ₹ 200 (A)
~~(D) ₹ 300 (F)~~

(x) M/s RSR Limited produced 5 units of finished goods in 7 hours. Standard time to produce 8 units of finished goods is 8 hours. It is observed that 1 hour is lost due to the factors under the control of the company. If standard labour rate is ₹ 20 per hour and actual labour rate is ₹ 30 per hour, Labour Rate & Labour Idle Time variance for the period are:

- (A) Labour Rate Variance ₹ 70 (A) and Idle Time Variance ₹ 20 (A)
- (B) Labour Rate Variance ₹ 60 (A) and Idle Time Variance ₹ 20 (A)
- ☒ (C) Labour Rate Variance ₹ 80 (A) and Idle Time Variance ₹ 20 (A)
- (D) Labour Rate Variance ₹ 70 (A) and Idle Time Variance ₹ 30 (A)

(xi) A _____ is projection of budget data at one level of activity.

- (A) Zero Base Budgeting
- (B) Rolling Budget
- ☒ (C) Static Budget
- (D) Master Budget

(xii) PICON Ltd.'s current financial year's income statement reports its net income after tax as ₹ 24,00,000. The company's marginal tax rate is 35% and its interest expense for the year was ₹ 18,00,000. What is the Operating Income (EBIT) earned by PICON Ltd. in the current year?

- (A) ₹ 42,00,000
- ☒ (B) ₹ 54,92,308
- (C) ₹ 55,00,000
- (D) ₹ 37,00,000

(xiii) The main focus of responsibility accounting lies on

- (A) Cost Centre
- (B) Profit Centre
- (C) Revenue Centre
- ☒ (D) Responsibility Centre

(xiv) M/s NORD Limited is evaluating a project with the following payoff:

High demand (Probability : 0.40): ₹ 100 lacs

Low demand (Probability : 0.60): ₹ 20 lacs

If risk penalty of 15% of expected payoff is applicable, the risk-adjusted expected return is:

(A) ₹ 52.00 lakhs

(B) ₹ 44.20 lakhs

(C) ₹ 59.80 lakhs

(D) ₹ 42.90 lakhs

(xv) The Regret Table is also known as

(A) Pay-off Table

(B) Opportunity Loss Table

(C) Probability Table

(D) Cost and Revenue Table

SECTION-B

Answer any five questions out of seven questions given.

Each question carries 14 marks.

14×5=70

2. (a) "The Scope of Management Accounting includes all information which is provided to Management for financial analysis and interpretation of the business operations" – In this context align the scope of Management Accounting. 7

(b) Neelam Devices Ltd. manufactures two products, Alpha and Beta. Alpha is a recently introduced product requiring frequent engineering modifications, whereas Beta is a stable product with minimal engineering interventions.

The following information is available:

Particulars	Alpha	Beta
Output (units)	2,400	2,600
Engineering change notices	36	14
Cost per engineering change	₹ 1,200	₹ 1,200
Machine hours per unit	3	5

Required:

- (i) Calculate overhead cost per unit using Traditional Machine Hour Rate.
- (ii) Calculate overhead cost per unit using Activity Based Costing.
- (iii) Give a concise comment on the results.

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3. (a) RSR Ltd. manufactures two products P and Q and sells them at ₹ 384 and ₹ 525 per unit respectively. The variable costs per unit are as under:

	Product P (₹)	Product Q (₹)
Raw Materials	158	240
Direct Wages (₹ 40 per hour):		
Department – A	60	80
Department – B	—	100
Department – C	80	—
Variable Overheads	32	45

The company operates a single shift of 8 hours per day for 300 days in a year. The number of workmen engaged is 78, 54 and 48 in Departments A, B, and C respectively. The employees cannot be increased nor can they be transferred from one department to another.

Required:

Calculate the number of units of each product that can be manufactured to yield maximum profit.

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- (b) Division K of KLM Industries Limited is a profit centre and its entire production is utilised by other divisions.

The information regarding Division K is as follows:

Annual Production (units)	25,000
Material Cost per unit	₹ 115
Labour Cost per unit	90
Manufacturing Overhead per unit (40% fixed)	35
Administrative Overhead per unit (fixed)	9
Apportioned amount of Investment of Division K	75,00,000
Corporate Tax Rate	30%

You are required to determine the transfer price under each of the following strategies:

- (i) 15% after tax profit on transfer price.
- (ii) 20 % return on investment (after tax).
- (iii) 30% mark up of marginal cost is added to total cost.

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4. (a) Alfa Ltd. makes two products X and Y whose respective fixed costs are F_1 and F_2 . You are given that

- The unit contribution of Y is one fifth less than the unit contribution of X.
- The total of F_1 and F_2 is ₹ 1,50,000
- BEP of X is 1,800 units (for BEP of X, F_2 is not considered) and
- 3,000 units is the indifference point between X & Y (i.e. X & Y make equal profits at 3,000 units considering their respective fixed costs).
- There is no inventory buildup, whatever is produced is sold.

You are required to find out:

- (i) Values of F_1 and F_2 .
- (ii) Unit contributions of X & Y.

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(b) Preetam of Patna presently operates his plant at 80% of the normal capacity to manufacture a product only to meet the demand of Government of Odisha under a rate contract. He supplies the product for ₹ 4,00,000 and earns a profit margin of 20% on sales. Direct cost per unit is constant. The indirect costs as per his budget projections are:

Capacity	80%	90%	100%
Productions (units)	20,000	22,500	25,000
Variable cost (₹)	80,000	90,000	1,00,000
Semi-variable cost (₹)	40,000	42,500	45,000
Fixed cost (₹)	80,000	80,000	80,000

He has received an export order for the product equal to 20% of its present operations. Additional packing charges on this order will be ₹ 1,000.

You are **required to arrive at the price** to be quoted for export order to give him a profit margin of 10% on the export price.

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5. (a) The standard labour component and the actual labour component engaged during the month are given below:

	Skilled	Semi-skilled	Unskilled
Standard number of workers in a group	30	10	10
Standard wage rate (₹ per hour)	5	3	2
Actual number of workers employed during the month in the group	24	15	12
Actual wage rate (₹ per hour)	6	2.5	2

During the month of 200 working hours, the group produced 9,600 standard hours of work.

Required:

Calculate Labour Rate Variance, Labour Efficiency Variance, Labour Mix Variance, and Total Labour Cost Variance.

- (b) The following data has been collected from the cost records of a unit for computing the various fixed overhead variances for a period:

Number of budgeted working days	25
Budgeted man-hours per day	6,000
Output (budgeted), per man-hour (in units)	1
Fixed overhead cost as budgeted	₹ 1,50,000
Actual number of working days	27
Actual man-hours per day	6,300
Actual output per man-hour (in units)	0.9
Actual fixed overhead incurred	₹ 1,56,000

Calculate the following fixed overhead variances:

- Expenditure Variance
- Calendar Variance
- Capacity Variance
- Efficiency Variance
- Volume Variance
- Cost Variance

6. (a) Century India Ltd. is manufacturing three products A, C and E in two production departments F and G. The following details in respect of these products are given below:

	A	C	E
Closing balance of finished stock anticipated on 31.03.25 (₹ in '000)	720	540	1,800
Closing balance of finished stock anticipated on 31.03.26 (₹ in '000)	600	570	1,000
Standard cost per unit (₹)	24	15	20
Standard profit as a percentage of selling price	20	25	16.66
Normal loss in processing (percentage of input)	10	20	5

Budgeted Sales (₹ in 000) for 2025-26 are:

	Total	A	C	E
Southern Region	5,800	1,200	1,000	3,600
Western Region	5,100	1,500	1,200	2,400
Northern Region	3,200	800	400	2,000
Eastern Region	3,180	700	400	2,080
Total	17,280	4,200	3,000	10,080

Standard labour time per unit & wage rate per hour are:

	Rate /hr (₹)	Labour Hour per unit		
		A	C	E
Department F	10	0.25	0.20	0.20
Department G	12	0.25	0.20	0.25

You are required to prepare:

(i) Production Budget for 2025-26

(ii) The Direct Labour Budget for 2025-26, product wise and department wise.

- (b) The cost of an article at a capacity level of 5,000 units is given in the table below under column A. For a variation of 25% in capacity above or below this level, the individual expenses vary, as indicated in column B.

	A (₹)	B (% of variability)
Material cost	25,000	100
Labour cost	15,000	100
Power	1,250	80
Repairs and Maintenance	2,000	75
Stores	1,000	100
Inspection	500	20
Administration overheads	5,000	25
Selling overheads	3,000	50
Depreciation	10,000	0
Total	62,750	

Required:

Find out the unit cost of product, showing each individual expense, at the production levels of 4,000 units and 6,000 units respectively.

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7. (a) M/s TechVision Ltd. has earned a net profit of ₹ 130 Lakhs after tax at 35%. The company has developed an innovative software platform which has gained significant market transactions. The platform has been patented and has a market value of ₹ 150 Lakhs, which is not recorded in the books.

The Net Worth of TechVision Ltd. is ₹ 300 Lakhs and Long-Term Debt is ₹ 600 Lakhs.

The rate on 365-day Government Securities is 8% p.a. The market portfolio generates a return of 13% p.a. The beta of the stock is 1, as the stock moves in line with the overall market.

You are **required** to calculate EBIT and EVA.

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- (b) ASHA SHG produces and exports handicraft items. One of the product lines is bamboo made model boat. The product is fully handmade and material required is bamboo & cane. ASHA SHG provides you the following details for production of one batch of 10 units:

Particulars	Amount (₹)
Direct Material Cost per unit	130
Direct Labour Cost per hour	300
Other Variable Overhead Cost per unit	70
Fixed Overhead Cost (committed) per unit	10

The first batch takes four labour hours to make and the learning rate applicable to the company is 80%. The company got an offer from M/s Toy Limited to supply 160 units of bamboo boat at ₹ 275 per unit.

Required:

Advise the company whether they can accept the offer from M/s Toy Limited.

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8. (a) Chandan Appliances Ltd., a manufacturer of smart home devices, plans to launch a new product called "Aero Pure Smart Air Purifier." Due to uncertain market acceptance, the management has estimated the following probability distribution of expected annual sales volume:

Annual Sales Volume (units)	Probability (%)
8,000	12
10,000	18
12,000	25
14,000	27
16,000	18

The marketing department estimates the following costs and revenue structure for the product:

- Selling price per unit: ₹ 8.50
- Variable manufacturing and selling cost per unit: ₹ 5.10
- Total annual fixed costs: ₹ 38,250

Management wants to assess the risk profile of the project before proceeding with full-scale production.

You are **required to find out**:

- (i) the probability that the company will at least break-even.
- (ii) the probability that the company will earn a minimum operating profit of ₹ 15,000.
- (iii) the expected annual profit of the product using the probability distribution. 7

- (b) **Name** different types of Responsibility Centres. Briefly **describe** the concepts of each responsibility centres. 7
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