

INTERMEDIATE EXAMINATION

June 2024

P-12(MA)
Syllabus 2022

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

(i) Which one of the following statements is false?

- (A) Management accountant uses cost accounting tools and techniques for planning and decision making.
- (B) Management accounting is mostly historical in its approach and it projects the past.
- (C) Cost accounting system can be installed without management accounting.
- (D) Management accounting focuses on wealth maximization.

(ii) According to DU-Pont Methodology, the parameter(s) that drive Return on Equity (ROE) is / are _____.

- (A) Operating performance
- (B) Asset usage performance
- (C) Financial Leverage
- (D) All of the above

- (iii) Which one of the following Responsibility Centers, is an Organizational Unit whose manager is responsible for managing revenues and current expenses?
- (A) Investment Center
 - (B) Revenue Center
 - (C) Profit Center
 - (D) Cost of Expense Center
- (iv) The Laplace Criterion is the feature of which of the following?
- (A) Deterministic Model
 - (B) Decision making under certainty
 - (C) Decision making under uncertainty
 - (D) Optimization
- (v) Bon, a division of BANT Ltd. a manufacturing company, has total assets of ₹ 12,00,000 and an Operating Income of ₹ 3,00,000. What is the Division's Residual Income (RI) if the cost of capital is 15%?
- (A) ₹ 1,80,000
 - (B) ₹ 1,50,000
 - (C) ₹ 1,20,000
 - (D) ₹ 60,000
- (vi) An employee of DOXIN Ltd. took 5 hours to complete the first unit job in the assembly line. Using a 80% incremental unit time learning model, the time to be taken to complete the second unit job will be _____.
- (A) 4 hours
 - (B) 3 hours
 - (C) 2 hours
 - (D) 5 hours

- (vii) In the factory of DOSN Ltd., using Standard Costing System, the details of overhead expenditure for the month of May'24 are as under:

	Standard (₹)	Actual (₹)
Fixed Overheads	80,000	85,000
Variable Overheads	1,20,000	1,15,000
Output (units)	40,000	?

If Fixed overhead volume variance is ₹ 4,000 (Adv.), identify the Actual Output (in units).

- (A) 38000 units
(B) 41000 units
(C) 42000 units
(D) Insufficient information
- (viii) FBT Ltd. is presently operating at 60% capacity and producing 600 units. The Cost structure at 60% Level of Activity is: Material ₹ 50 per unit, Labour ₹ 25 per unit, Direct expenses ₹ 5 per unit, Factory overheads ₹ 20,000 (60% variable) and Administration expenses ₹ 15,000 (60% fixed). What will be the Total Cost per unit for production at 80% capacity?
- (A) ₹ 1,05,000
(B) ₹ 131.25
(C) ₹ 126.25
(D) None of the above
- (ix) SNG Ltd. is choosing which of three products P, Q and R to make and has calculated likely payoffs under three possible scenarios (A_1 , A_2 or A_3), giving the following payoff table:

Profit/(Loss) Scenarios	Product Chosen		
	P	Q	R
A_1	40	80	20
A_2	80	100	150
A_3	100	(20)	70

Using maximax, identify the product which would be chosen by the company.

- (A) Product P
(B) Product Q
(C) Product R
(D) None of the above

- (x) A _____ is defined as a budget continuously updated by adding a further accounting period when the earlier accounting period has expired.
- (A) Zero base budget
 - (B) Step-up budget
 - (C) Rolling budget
 - (D) Performance budget
- (xi) In _____ both fixed and variable costs are considered for product costing and inventory valuation.
- (A) Marginal Costing
 - (B) Relevant Costing
 - (C) Absorption Costing
 - (D) Activity Based Costing
- (xii) M/s Unicorn Limited sold 200 units and 300 units of its product in 2023 and 2024 respectively. If total overhead for 2023 and 2024 is ₹ 10,000 and ₹ 12,000 respectively, the fixed overhead would be _____.
- (A) ₹ 6,000
 - (B) ₹ 4,000
 - (C) ₹ 8,000
 - (D) ₹ 10,000
- (xiii) If P/V Ratio is 20%, Selling price per unit is ₹ 50, Margin of safety is 2000 units and Fixed cost is ₹ 30,000, the actual sales quantity is _____.
- (A) 4000 units
 - (B) 6000 units
 - (C) 5000 units
 - (D) 7000 units
- (xiv) A Limited produces 500 units of product in 7500 hours against standard hours of 8000. If standard rate per hour is ₹ 50, then labour efficiency variance will be ₹ _____.
- (A) 25,000 (F)
 - (B) 25,000 (A)
 - (C) 40,000 (F)
 - (D) 50,000 (F)

(xv) Expected returns of two mutually exclusive project is 15%. The S.D. of return of Project-1 is 20% while S.D. of return of Project-2 is 10%. The Coefficient of variation of Project-1 and Project-2 are _____.

- (A) Project-1 = 0.75 and Project-2 = 0.90
 (B) Project-1 = 1.33 and Project-2 = 0.66
 (C) Project-1 = 1.43 and Project-2 = 0.86
 (D) Project-1 = 1.39 and Project-2 = 0.56

SECTION - B

Answer any five questions out of seven questions given. Each question carries 14 marks

14×5=70

2. (a) Distinguish between Financial Accounting and Management Accounting. 7
 (b) BONT Ltd., is following Activity Based Costing. The budgeted overheads and cost driver volumes of the company are as follows:

Cost Pool	Budgeted Overheads (₹)	Cost Driver	Budgeted Volume
Material Procurement	11.60 Lakhs	No. of Orders	2200
Material Handling	5.00 Lakhs	No. of Movements	1360
Maintenance	19.40 Lakhs	Maintenance hours	16800
Set-up	8.30 Lakhs	No. of Set-ups	1040
Quality Control	3.52 Lakhs	No. of Inspections	1800
Machinery	14.40 Lakhs	No. of Machine hours	48000

The company has produced a batch of 5200 components AXL 6. Its material cost was ₹ 2.60 Lakhs and labour cost was ₹ 4.90 Lakhs.

The usage of activities for the said batch are as follows:

Material Orders	52	Maintenance hours	1380
Material Movements	36	Quality Control inspections	56
Set-ups	50	Machine hours	3600

Required:

- (i) Calculate the cost driver rates that are used for tracing the appropriate amount of overheads to the said batch (approximate rates to whole number).
 (ii) Ascertain the cost of batch of components AXL 6 using Activity Based Costing (ABC).

3. M/s Posco Limited is manufacturing 4000 units of product Zimzam utilising 100% of its machine capacity. The selling price per unit and cost per unit of product Zimzam are as under:

Particulars	Amount (₹)	Amount (₹)
Selling Price per unit		700
<u>Cost per unit:</u>		
Direct Material Cost	100	
Variable Machine Operating Cost (₹ 100 per Machine Hour)	150	
Other Factory Overhead Cost	180	
Selling & distribution Overhead Cost	200	630
Profit per unit		70

Posco Limited can sell maximum 8000 units of product Zimzam in market. However, due to limited machine hour capacity, it can produce maximum 4000 units of product Zimzam in-house. M/s SB Limited, a quality supplier of products, can supply up to 3000 units of product Zimzam at a price of ₹ 620 per unit up to Posco's place.

Posco Limited can use its facility to manufacture an alternative product called Bonbon. It can sell up to 10,000 units of Bonbon annually. The selling price per unit and cost per unit of product Bonbon are as under:

Particulars	Amount (₹)	Amount (₹)
Selling Price per unit		700
<u>Cost per unit:</u>		
Direct Material Cost	300	
Variable Machine Operating Cost (₹ 100 per Machine Hour)	50	
Other Factory Overhead Cost	50	
Selling & distribution Overhead Cost	100	500
Profit per unit		200

Posco Limited provides you the following additional information:

- (i) Variable Selling & distribution Overhead cost per unit are as under:

Particulars	Amount (₹)
Manufacturing product Zimzam In-house	80
Purchasing product Zimzam from M/s SB Limited	60
Manufacturing product Bonbon In-house	70

- (ii) Posco Limited uses machine hour as the basis for assigning fixed factory overhead cost. The fixed factory overhead cost for the year is ₹ 2,40,000. These costs will not be affected by the product mix decision.

Required:

- (i) Suggest the quantity of each product that M/s Posco Limited should manufacture/purchase to maximise its profit.
- (ii) Calculate total profit of M/s Posco Limited under (i) above. 14

4. (a) RNS Ltd., a manufacturing company has introduced a new product and marketed 20000 units. The variable cost and profit of the product are ₹ 20 per unit and ₹ 4 per unit respectively.

The Fixed overheads are ₹ 3,20,000.

Required:

- (i) Analyse the BEP (in quantity) and Margin of Safety (in amount).
- (ii) Calculate the Margin of Safety if profit is ₹ 64,000.
- (iii) If the selling price is reduced by the company by 10%, demand is expected to increase by 5000 units. Analyse its impact on Profit, BEP (in quantity) and Margin of Safety (in amount). 7

- (b) KAUTILYA LTD, currently working at 80% capacity, has the following particulars:

Particulars	₹
Sales	48,00,000
Direct Materials	15,00,000
Direct Labour	6,00,000
Variable Overheads	3,00,000
Fixed Overheads	19,00,000

An export order has been received that would utilize half (50%) the capacity of the factory. The order cannot be split i.e. either it is to be taken in full and executed at 10% below the normal domestic price or be rejected totally. The alternatives available to the management of the company are:

- (i) Reject the order and continue with domestic sales only (as at present level of sales). Or,
- (ii) Accept the order, split the capacity (100%) between overseas and domestic sales and turn away excess domestic demand. Or,
- (iii) Increase capacity so as to accept the export order and maintain the present domestic sales by —

- A. Buying an equipment that will increase capacity by 10%. This will result in an increase of ₹1,50,000 in fixed costs; and
- B. Work overtime to meet balance of required capacity. In that case, labour will be paid at one and a half (1½) times the normal wage rate.

Required:

Prepare a comparative statement of profitability and suggest the best alternative. 7

5. M/s Lalkamal Limited manufactures two products X and Y and sells their products through its East and North-East division. Budgeted sales units from January to June, 2024 are as under:

Month	Product - X		Product - Y	
	East Division	North-East Division	East Division	North-East Division
	Qty (Units)	Qty (Units)	Qty (Units)	Qty (Units)
Jan,24	2000	2500	2000	1500
Feb,24	2200	2700	3000	2500
Mar,24	3000	3500	4000	3500
Apr,24	2500	2400	2000	1700
May,24	2400	2000	1800	1500
June,24	3000	3400	3200	2800
Total	15100	16500	16000	13500

Additional information:

- (i) The sale price per unit of Product X is ₹ 100 and that of Product Y is ₹ 75. The Company has conducted a market survey and from the market study, it reveals that Product X is overpriced by ₹ 5 per unit and Product Y is underpriced by ₹ 10 per unit. Considering the market study, the marketing division of the company has proposed for price change and the Management of the company has approved the same. As a result, expected percentage increase in sales units are as under:

Product	East Division	North-East Division
X	+ 5%	+ 10%
Y	+ 10%	+ 6%

- (ii) The Company sells 20% of its products in cash. Remaining 80% of sales are on credit basis. 30% of credit sales are collected in the same month and balance 65% are realized in the next month. On an average 5% of credit sales becomes bad debts.

- (iii) Considering the risk of bad debts, the company is planning to enter into a factoring agreement with M/s PVK Limited for the sales made on credit w.e.f. June, 2024. As a result, entire credit sale proceeds are realized in the same month. M/s PVK Limited charges 2% as factoring commission.
- (iv) P/V ratio of the company is 40%.
- (v) 60% of the Variable Cost are Direct Material Cost which are paid 1 month in lag.
- (vi) 30% of the Variable Cost are Direct Labour Cost which are paid within 7th of the subsequent month.
- (vii) Remaining Variable Cost are Variable Overheads. 50% of Variable Overheads are paid in the same month and balance in the next month.
- (viii) Fixed Cost of the company for the whole year is budgeted to be ₹ 50 lakhs including depreciation of ₹ 2 lakhs. Fixed Costs are expected to be evenly distributed over all months and costs incurred are paid in the same month.
- (ix) Cash in hand as on 01-04-2024 is ₹ 2,70,000.

Required:

Prepare a Cash Budget for the three months ending 30th June, 2024.

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6. (a) JK Ltd. has furnished the following information:

Standard overhead absorption rate per unit ₹ 20

Standard rate per hour ₹ 4

Budgeted production 12000 units

Actual production 15560 units

Actual overheads were ₹ 2,95,000 out of which ₹ 62,500 is fixed.

Actual hours 74000

Overheads are based on the following flexible budget:

Production (units)	8000	10000	14000
Total Overheads (₹)	1,80,000	2,10,000	2,70,000

Required (with detailed working note and on hourly basis):

- (i) Calculate Standard Variable O/H and Fixed O/H rates per hour.
- (ii) Calculate Variable Overhead Efficiency and Expenditure Variance.
- (iii) Calculate Fixed Overhead Efficiency and Capacity Variance.

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- (b) ENTEC Ltd., an electronic gadget manufacturer has prepared sales budget for the next few months. In this respect, following figures are available:

Months	Electronic gadgets' sales
January	5000 units
February	6000 units
March	7000 units
April	7500 units
May	8000 units

Apart from other materials, two units of batteries are required to manufacture a gadget. The company wants to hold stock of batteries at the end of each month to cover 30% of next month's production and to hold stock of manufactured gadgets to cover 25% of the next month's sale. 3250 units of batteries and 1200 units of manufactured gadgets were in stock on 1st January.

Required:

- Prepare the production budget (in units) for the month of January, February, March and April.
- Prepare the purchase budget for batteries (in units) for the month of January, February and March.

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7. (a) The Summarized Balance Sheet of M/s Sova Limited as on 31-03-2024 is as under:

Liabilities	Amount (₹ in Lakhs)	Asset	Amount (₹ in Lakhs)
Equity Share Capital	25	Fixed Assets	80
Reserve & Surplus	15	Other Assets	20
12% Bond	10		
Accumulated Depreciation	5		
Other Liabilities	45		
	100		100

M/s Sova Limited is engaged in manufacturing Electrical Transformers. The Sales & Cost details for the year ended 31-03-2024 is as under:

Particulars	Value
Selling Price per unit	₹ 5,000
P/V Ratio	20%
Margin of Safety (MOS) Ratio	60%
Fixed Cost per annum	₹ 25 Lakhs
Tax rate	30%
Risk free rate of return	8%
Market rate of return	17%
β factor	1.1
Debt-Equity Ratio	1 : 4

Required:

Calculate the Economic Value Added (EVA).

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- (b) ZEMAN Ltd., a manufacturing company has 10 direct workers, who work for 25 days a month of 8 hour per day. The estimated down time is 25% of total available time. The company makes gift items. The company has received an order of 30 units from a customer. The first unit of gift item required 40 direct labour hours to manufacture.

The company expects 90% (Index is = -0.152) learning curve for this type of work.

The company uses standard absorption costing and cost data is as under:

Direct Material	₹ 60 per unit
Direct Labour	₹ 6 per direct labour hour
Variable Overheads	₹ 2 per direct labour hour
Fixed Overheads	₹ 7,500 per month

Required:

- Calculate the total cost per unit of gift item for the first order of 30 units.
- If the company receives a repeat order from the said customer for 40 units of gift items, ascertain the price per unit to be quoted to yield a profit of 20% on selling price. (All figures to be rounded off to whole number).

[Given: $(30)^{-0.152} = 0.596$; $(50)^{-0.152} = 0.552$; $(60)^{-0.152} = 0.537$ and $(70)^{-0.152} = 0.524$]

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8. (a) TEXTON Ltd. (TL), a textile company, is considering whether to enter a new market. In case the company decides to enter this market, it must increase its production. To achieve higher production, it must either install a new plant with a cash outlay of ₹ 3,00,000 or pay overtime wages to its workers, which are expected to amount to ₹ 1,00,000. If the company decides to enter the market, there is a 60% chance of its shareholders approving the installation of the new plant. A random sample of current market structure reveals that there are 40% chances for achieving a high level of sales by the company, 30% chances of achieving a medium level of sales, 20% chances of low sales and 10% chances of achieving no sales. Further, a high level of sales will yield a profit of ₹ 10,00,000, a medium level of sales will yield a profit of ₹ 6,00,000 and a low level of sales will yield a profit of ₹ 2,00,000. If there are no sales, the company will lose ₹ 5,00,000, apart from the cost of the equipment.

Required:

Represent the above problem in the form of a decision tree and suggest the option that should be selected by the company. 7

- (b) What do you mean by Responsibility Centre? Explain in brief the various types of Responsibility Centers. 7