

INTERMEDIATE EXAMINATION

December 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) _____ criteria are a set of standards for a company's behaviour used by socially conscious investors to screen potential investments.
- (A) JIT
(B) AMT
(C) ESG
(D) ABC
- (ii) M/s SB Limited produces 10,000 units of Product - S and 15,000 units of Product - R at a total cost of ₹ 2,00,000. Total Cost of the company is apportioned in two types of activities, Machine hour related and Labour hour related in the ratio of 3:2. The following information is also provided:

Particulars	Product - S	Product - R
Machine Hour	3,000	2,000
Labour Hour	5,000	3,000

The Cost Per Unit of Product - S and Product - R are:

- (A) Product - S ₹ 15.80 and Product - R ₹ 6.40
(B) Product - S ₹ 13.70 and Product - R ₹ 7.15
(C) Product - S ₹ 12.20 and Product - R ₹ 5.20
(D) Product - S ₹ 11.80 and Product - R ₹ 5.30
- (iii) Which of the following is the main cost driver of customer order processing activity?
- (A) Flow of the product from the assembly line
(B) Order value
(C) Number of product suppliers
(D) Number of machine charges

- (iv) M/s Zimbra Limited sold 65,000 units of its product at ₹ 80 per unit. P/V Ratio is 20%. If total Fixed Cost is ₹ 6,40,000, the Margin of Safety (Units) is _____.
- (A) 20,000 Units
(B) 25,000 Units
(C) 22,000 Units
(D) 28,000 Units
- (v) To obtain the break-even point in rupee sales value, total fixed costs are divided by _____.
- (A) Variable Cost Per Unit
(B) Contribution Margin Per Unit
(C) Fixed Cost Per Unit
(D) Profit/Volume Ratio
- (vi) M/s Littles Limited operates in single shift. Standard production is 8 units per shift of 8 hours at ₹ 200 per hour. Actual production is 5 units per shift. The company allows 1 hour for lunch break. Actual rate of labour hour is ₹ 210. The Labour Efficiency Variance is _____.
- (A) ₹ 600 (Adverse)
(B) ₹ 600 (Favorable)
(C) ₹ 300 (Adverse)
(D) ₹ 400 (Adverse)
- (vii) Which one of the following is not considered as a method of Transfer Pricing?
- (A) Negotiated Transfer Pricing
(B) Market Price Based Transfer Pricing
(C) Fixed Cost Based Transfer Pricing
(D) Opportunity Cost Based Transfer Pricing
- (viii) What is the name given to a budget that has been prepared by re-evaluating activities and comparing the incremental costs of those activities with their incremental benefits?
- (A) Incremental budget
(B) Rolling budget
(C) Zero based budget
(D) Flexible budget

- (ix) WDV of Fixed Asset of M/s Vanguard Limited as on 31-03-2024 is ₹ 22,50,000. On 01-07-2024, the Company sold an asset having WDV of ₹ 2,50,000 for ₹ 2,75,000. Other income for the year 2024-25 is ₹ 2,00,000. The ROI of the company is _____.
- (A) 10.50%
- (B) 8.88%
- (C) 11.25%
- (D) 10%
- (x) Which of the following is the formula for calculating RI (Residual Income)?
- (A) Divisional profit - (Percentage of change in Sales × Divisional investment)
- (B) Divisional profit - (Per cent capital charge × Total investment)
- (C) Divisional profit - (Per cent capital charge × Divisional investment)
- (D) Total profit - (Per cent capital charge × Divisional investment)
- (xi) The theory of learning curves will only hold if which of the following conditions apply?
- (A) The task must be repetitive.
- (B) Production must be at an early stage so that there is room for improvement.
- (C) There is inconsistency in the workforce.
- (D) Both (A) and (B)
- (xii) M/s Zeon Limited is currently manufacturing a component of a finished product which is readily available at market at ₹ 25 per unit. In-house manufacturing cost per unit comprises of Direct Material cost of ₹ 10 and other Overheads of ₹ 15 of which 60% is fixed. If the company decides to buy the component from open market instead of manufacturing in-house, the machine can be used to manufacture another component fetching a contribution of ₹ 12 per unit. The relevant cost per unit of manufacturing the product in-house is _____.
- (A) ₹ 25
- (B) ₹ 37
- (C) ₹ 31
- (D) ₹ 28

- (xiii) M/s Nikita Limited purchases raw materials at ₹ 35.40 inclusive of GST @ 18%. The company is eligible for Input Tax Credit of GST paid. Machine hour rate is ₹ 576. The product is manufactured in a specialized dice having facility to manufacture 2 products at a time. The cycle time per short is 25 seconds. The Cost of Production per unit is
- (A) ₹ 37.40
(B) ₹ 32
(C) ₹ 34
(D) ₹ 39.40
- (xiv) According to DuPont model, the main functional parameters that drive Return on Equity (ROE) is _____.
- (A) Operating performance.
(B) Asset usage performance.
(C) Financial leverage.
(D) All of the above
- (xv) Which of the following is not true?
- (A) Marginal costing is a system of costing.
(B) Key factor is important in ascertaining the profitability.
(C) Under marginal-costing technique, fixed costs are charged off to revenue fully during the period in which they are incurred but not taken into account for valuing inventories.
(D) Plant and machinery may depreciate more quickly when kept idle than when being used.

SECTION – B

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

14×5=70

2. (a) “Though Management Accounting is very closely linked to Cost Accounting, there is clear demarcation between the two.” – In this context, compare Cost Accounting and Management Accounting in a tabular form.

- (b) ASTHAMA Ltd. manufactures three Product P, Q and R which are similar in nature and are usually produced in production runs of 100 units. Product P and R require both machine hours and assembly hours, whereas Product Q requires only machine hours. The overheads incurred by the company during the first quarter of year 2024 - 25 are as under:

Particulars	₹
Machine Department Expenses	18,48,000
Assembly Department Expenses	6,72,000
Setup Costs	90,000
Stores Receiving Cost	1,20,000
Order processing and Dispatch	1,80,000
Inspection and Quality Control Cost	36,000

The data related to the three products during the period are as under:			
Particulars	P	Q	R
Units produced and sold	15000	12000	18000
Machine hours worked	30000 hrs.	48000 hrs.	54000 hrs.
Assembly hours worked (Direct Labour hours)	15000 hrs.	—	27000 hrs.
Customers' orders executed (in numbers)	1250	1000	1500
Number of requisitions raised on stores	40	30	50

You are required to

- Calculate the cost driver rates that are used for tracing the appropriate amount of overheads to the respective products.
 - Prepare a statement showing details of overhead costs allocated to each product using Activity Based Costing.
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3. M/s Garlic Hotels has three categories of rooms in the hotel. Five suit rooms, 50 superior rooms and 40 standard rooms. Room tariff of standard room is ₹ 5,000/- per day. Garlic Hotels provides you the following details in respect of its standard rooms for the financial year 2023-24:

Particulars	Amount (₹ in Lakhs)
Total Room tariff collected	400
Variable Cost	160
Fixed Cost - Standard Rooms	60
Apportioned Cost of Hotel's Administrative Charges	100
Salary of Housekeeping Staff	As stated below

Based on occupancy, the hotel employed following housekeeping staff at ₹ 60,000/- per month per staff.

Room Days	No. of Housekeeping Staff engaged
Less than 7500	10
7500 to 9500	15
Above 9500	20

The projections for the next financial year are as under:

- All costs, except apportioned cost of hotel's administrative charges, will go up by 10%.
- Apportioned cost of hotel's administrative charges will increase by ₹ 11 lacs.
- There will be a salary hike of housekeeping staff by 5%.
- Room tariff will increase by 10%. However, room occupancy is not likely to increase in the next financial year.

The Management of Garlic Hotels is actively considering a proposal to convert all standard rooms to superior rooms. In that event, the Fixed Cost of standard rooms can be avoided.

You are required to

- Determine the profitability of the hotel in respect of Standard Room segment for both the years.
- Calculate the Break-Even Room Occupancy for the next financial year.
- Suggest increase, if any, in room tariff in order to justify the continuance of standard room segment at the existing occupancy.

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4. (a) M/s Srikar Limited provides you the following data for the year ended 31-03-2024:

Particulars	Amount (in ₹)
Selling Price Per Unit	200
Raw Material Cost Per Unit	100
Direct Labour Per Unit	30
Variable & Fixed Overhead Cost	1,00,000

M/s Srikar Limited sold 2000 units in 2024-25. In 2025-26, the selling price per unit will remain the same. Direct wage rate will increase by 20% and fixed cost will decrease by ₹ 6000. If 3,000 units are sold in 2025-26, the total Variable & Fixed Overhead will be ₹ 1,14,000.

You are required to

- Calculate the profit per unit in 2024-25.
- Determine the units to be sold in 2025-26 in order to earn same amount of profit per unit as in 2024-25.

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- (b) AKONA Ltd., manufactures two types of mobile phones, XB and YB. Due to severe competition, it has to reduce the prices for the next production period. The following information is provided:

Particulars	XB	YB
Current Period:		
Selling price (₹ / unit)	10,000	12,000
P/ V Ratio	25%	30%
Product-specific fixed cost (₹)	10,00,000	15,00,000
Next Period:		
Selling price (₹ / unit)	8,000	9,000

For the next period, the company wants the current P/V ratio to be maintained and to achieve a break-even for both the products at 400 units.

It is assumed that the number of units to be sold for XB and YB to break-even as well as the total number of units of XB and YB to be sold during the year are same.

You are required to

Analyze the cost reduction program to be envisaged (i.e., reduction in fixed expenses product-wise).

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5. BOSTIN Ltd. uses standard costing system in its factory. It started trading on 1st April, 2023, for manufacturing and selling one product. The standard cost per unit was

Direct Material:	Standard price ₹ 10 per kilogram
Standard Quantity:	20 kilogram per unit
Direct Labour:	Standard rate of pay ₹ 5.50 per hour
Standard Time Allowance:	12 hours per unit

Production overhead costs (all classified as fixed) were budgeted at ₹ 9,00,000 per annum. The standard time for producing one unit is 12 machine hours and normal capacity is 60000 machine hours per annum. Production overhead is absorbed on machine hour.

For the year ended 31st March, 2024, the costs incurred and other relevant information are given below:

Direct Material used:	100000 kilograms at a cost of ₹ 10,50,000
Direct wages paid:	₹ 3,10,000 for 62000 hours
Production overhead:	₹ 9,26,000
Machine Capacity used:	60000 hours
Actual output:	4800 units

Assume no stock of work-in-progress or finished goods at the year end.

You are required to

- (i) Calculate the standard product cost for one unit.
- (ii) Analyze the variances for Material (Cost, Price and Usage), Labour (Rate, Efficiency and Cost) and Fixed overheads (Expenditure, Efficiency, Capacity and Cost.) 14

6. (a) KAUN Ltd. using Standard Costing System, produces a chemical product by blending two basic raw materials.

The standard cost of a chemical mixture is as follows:

60% of Material A @ ₹ 50 per kg.

40% of Material B @ ₹ 60 per kg.

A standard loss of 20% on input is expected in production. The cost records for a period have shown the following usage:

540 kgs. of Material A @ ₹ 60 per kg.

260 kgs. of Material B @ ₹ 50 per kg.

The quantity processed was 680 kilograms of good product.

From the above given information analyze the following variances:

- (i) Material Cost Variance
- (ii) Material Price Variance
- (iii) Material Mix Variance
- (iv) Material Yield Variance

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- (b) G Ltd. manufactures two products called 'M' and 'N'. Both products use a common raw material Z. The raw material Z is purchased @ ₹ 72 per kg from the market. The company has decided to review inventory management policies for the forthcoming year.

The following forecast information has been extracted from departmental estimates for the year ended 31st March, 2025 (the budget period):

Particulars	M	N
Sales (units)	28,000	13,000
Finished goods stock increase by year-end	320	160
Post-production rejection rate (%)	4	6
Material Z usage (per completed unit, net of wastage)	5 kg	6 kg
Material Z wastage (%)	10	5

Additional information:

The management of G Ltd. has decided that there should not be more than 40 orders in a year for the raw material Z.

You are required to

- (a) Prepare functional budgets for the year ended 31st March, 2025 under the following headings:
- Production budget for Products M and N (in units).
 - Purchases budget for Material Z (in kgs and value).

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7. (a) The Cost Sheet of M/s Aptamil Limited for the year ended 31-03-2024 is as under:

Particulars	Cost Per Unit (in ₹)
Direct Material	5
Direct Labour	3
Direct Expenses	2
Prime Cost	10
Factory Overheads	4
Works Cost	14
Office & Administrative Overheads	4
Cost of Goods Sold	18
Selling & Distribution Overheads	2
Cost of Sales	20

The company sold 5 lacs units of its product during 2023-24 at a margin of 15% on cost. There is no opening & closing stock of finished goods. On 01-07-2023 the company sold an asset for ₹ 2,50,000 to M/s Isomil Limited. The cost and accumulated depreciation of the asset as on 31-03-2023 is ₹ 3,50,000 and ₹ 1,50,000 respectively. The Company charges depreciation @ 10% under Written Down Value (WDV) method. There is no tax on profit on sale of asset. The market capitalization of the company comprises of the following:

Particulars	Amount (in ₹)
12% Bond	10,00,000
Equity Share Capital	7,00,000
Reserve & Surplus	1,00,000
	18,00,000

Additional information:

- Risk free rate of return is 10%.
- NIFTY return is 15%.

- (iii) Effective rate of tax applicable to the company is 30%.
- (iv) Beta factor (β) of the company is 0.90. Assume Principle of Capital Asset Pricing Model (CAPM) holds good.

You are required to

Calculate Economic Value Added (EVA) of M/s Aptamil Limited as on 31-03-2024 and comment on your answer. 7

- (b) NITOOZ Ltd., a manufacturer of fountain pens, received an order of 16 units of a new fountain pen named GOLDX. The first unit was made in 20 direct labour hours. The production manager expects 80% (index is = -0.322) learning effect for this type of operations. So far 6 units have been completed and a total of 81.91 direct labour hours have been recorded. The cost and sales price of first unit of fountain pen have been estimated as follows:

Particulars	₹
Direct Materials	20
Direct Labour (20 hrs. x ₹6)	120
Variable overhead (Re.0.50 per direct Labour hour)	10
Fixed overhead apportioned (Rs 5 per direct Labour hour)	100
Profit Mark-up (20% on cost)	50
Sales Price	300

You are required to

- (i) Analyze the estimated sales price of fountain pen for the initial order of 16 units.
- (ii) Assess the minimum quoted price per unit if a repeat order of 20 units is also received from the same customer. (Approximate up to two decimal points)

[Given: $(4)^{-0.322} = 0.640$, $(16)^{-0.322} = 0.4095$

$(20)^{-0.322} = 0.3811$, $(30)^{-0.322} = 0.3345$

$(36)^{-0.322} = 0.3154$ 7

8. (a) Mr. GURBIK, a farm owner, is seriously considering the drilling of a farm well. In the past, only 70% of wells drilled were successful at 200 feet of depth in that area. Moreover, on finding no water at 200 feet, some persons drilled it further up to 250 feet but only 20% struck water at 250 feet. The prevailing cost of drilling is ₹ 50 per foot. The farm owner has estimated that in case he does not get his own well, he will have to pay ₹ 15,000 over the next 10 years (in Present Value Terms) to buy water from the neighbour.

The following decisions can be optimal:

- (i) Do not drill any well,
- (ii) Drill up to 200 feet and
- (iii) If no water is found at 200 feet, drill further up to 250 feet.

You are required to

- (i) Draw an appropriate Decision Tree.
 - (ii) Identify the farm owner's strategy under EMV Approach. 7
- (b) "A responsibility accounting system helps organizational unit managers to conduct the five basic control functions".—In this context, discuss the said basic control functions. 7
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The following decisions can be applied:

- (a) 100 feet and well
- (b) 200 feet and
- (c) If no water is found at 200 feet, drill further to 250 feet

You are required to

- (1) Draw an appropriate log and log
- (2) Identify the formation and its approximate depth
- (3) A preliminary accounting system is required and managers to conduct the
- (4) The team control functions - in this case, discuss and make control functions