MANAGEMENT ACCOUNTING

Time Allowed: 3 Hours **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option: **[15×2 = 30]**

i. Which of the following is NOT typically part of Management Accounting?
a. Cost analysis and control
b. Performance evaluation and variance analysis
c. Preparation of financial statements for external reporting
d. Budgeting and forecasting

ii. What role do management accountants play in evaluating the impact of external changes on the business?
a. Assessing the impact of government policy and law changes on business goals
b. Designing marketing strategies
c. Setting up employee benefits plans
d. Managing customer relations

iii. Activity based cost systems would probably provide the greatest benefits for organizations that use
a. Job order costing
b. Process costing
c. Batch costing
d. Standard costing

iv. In Activity Based Costing:
a. Non-manufacturing costs may not be assigned to products
b. Some manufacturing costs may be excluded from product costs
c. Allocation bases are the same as those used in traditional costing methods
d. Similar to traditional costing, ABC only uses one overhead cost pool

v. In a purely competitive market, 10,000 pocket transistors can be manufactured and sold and certain profit is generated. It is estimated that 2.0 pocket transistors need to be manufactured and sold in a monopoly market to earn the same profit. Profit under both conditions is targeted at ₹2,00,000. The variable cost per transistor is ₹100 and total fixed costs are ₹37,000. Unit selling price per transistor under monopoly condition will be:
a. ₹ 234.50
b. ₹ 267.25
c. ₹ 274.35
d. ₹ 218.50

vi. A firm has given the following data:

Fixed expenses at 50% ₹15,000, Fixed expenses when factory is close down ₹10,000, Additional expenses in closing down ₹1,000, Production at 50% capacity 5,000 units, contribution per unit ₹1. Advise whether to run the factory or close it down:

a. Run
b. Close
c. Continue
d. None of the above

vii. Minimax Ltd. fixes inter - divisional transfer prices for its products on the basis of cost plus a return on investment in the division. The budget for division X for 2022 – 23 appears as under –

Fixed Assets ₹8, 00,000
Current Assets ₹5, 00,000
Debtors ₹2, 00,000
Annual fixed cost of the division ₹8, 00,000
Variable cost per unit of the product ₹10
Budgeted volume 4, 00,000 units per year
Desired ROI 28%
Transfer price for division X is?

a. ₹13.05
b. ₹10.70
c. ₹8.70
d. ₹14.70

viii. The standard cost card contains quantities and costs for

a. Direct material only.
b. Direct labour only.
c. Direct material and direct labour only.
d. Direct material, direct labour, and overhead.

ix. In producing product ZZ, 14,800 direct labor hours were used at a rate of ₹8.20 per hour. The standard was 15,000 hours at ₹8.00 per hour. Based on these data, the direct labour:

a. Quantity variance is ₹1,600 unfavourable.
b. Price variance is ₹2,960 favourable.
c. Quantity variance is ₹1,600 favourable.
d. Price variance is ₹3,000 unfavourable.

x. A company expects to sell 50,000 units at ₹20 each. The variable cost per unit is ₹12, and the fixed costs are ₹180,000. What is the company's budgeted profit?

a. ₹4,00,000
b. ₹2,20,000
c. ₹1,40,000
d. ₹2,00,000

xi. ____________ is the first step of budgetary system and all other budgets depends on it.

a. Cost budget
b. Sales budget
c. Production budget
d. None of the above

xii. At the start of the year, a division has non-current assets of ₹4 million and makes no additions or disposals during the year. Depreciation is charged at a rate of 10% per annum on all non-current assets held at the end of the year. Working capital is ₹0.5 million at the start of the year although this is expected to increase by 20% by the end of the year. The budgeted profit of the division after depreciation is ₹1·2m. What is the expected ROI of the division for the year, based on average capital employed?

a. 31·58%
b. 26·37%
c. 18·39%
d. 27·59%

xiii. The characteristics of a responsibility system for a JIT, or lean organization include:

a. Competition between subsystems.
b. Independence of subsystems.
c. Cross functional measurements.
d. A and B.

xiv. The most elementary form of responsibility center is the ____________.

a. Investment Center
b. Revenue Center
c. Profit Center
d. Cost Center

xv. A company is choosing which of three new products to make (A, B or C) and has calculated likely payoffs under three possible scenarios (I, II or III), giving the following payoff table.

Profit (Loss) Scenario	Product Chosen		
	A	B	C
I	20	80	10
II	40	70	100
III	50	(10)	40

Using maximax, which product would be chosen?

a. Product A
b. Product B
c. Product C
d. None of the Products

Section – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks)

[5 x 14 = 70]

2. (a) Management Accounting serves as a tool to management – discuss. **[7]**

(b) ABC & Associates provides consulting and tax preparation services to its clients. It charges a ₹100 fee per hour for each service. The firm's revenues and costs for the month March 2022 are shown in the following income statement:

Particulars	Tax Preparation	Tax Consulting	Total
Revenue - Amount (₹)	1,30,000	2,70,000	4,00,000
Expenses:			
Secretarial support			80,000
Supplies			72,000
Computer costs, etc.			40,000
Profit			1,92,000

The firm uses ABC and the following are the cost drives:

Overhead Cost	Cost Driver	Tax Preparation	Tax Consulting
Secretarial support	Number of clients	72	48
Supplies	Transactions with clients	200	300
Computer costs	Computer hours	1,000	600

Required:

a. Complete the income statement using activity-based costing and the firm's three cost drivers.

b. Recompute the income statement using direct-labour hours as the only allocation base: 1,300 hours for tax preparation; 2,700 hours for tax consulting.

c. How might the firm's decisions be altered if it were to allocate all overhead costs using direct labour hours?

d. Under what circumstances would the about-based allocation and activity-based costing (using the three cost drivers) result in similar profit result? **[7]**

3. Division A is a profit centre, which produces four products P, Q, R and S. Each product is sold in the external market also. Data for the period is as follows:

	P	Q	R	S
Market Price per unit (₹)	350	345	280	230
Variable Cost of Production per unit (₹)	330	310	180	185
Labour hours required per unit	3	4	2	3

Product S can be transferred to Division B but the maximum quantity that might be required for transfer is 2,000 units of S.

The maximum sales in the external market are:

P	3,000 units
Q	3,500 units
R	2,800 units
S	1,800 units

Division B can purchase the same product at a slightly cheaper price of ₹225 per unit instead of receiving transfers of products S from Division A.

Suggest the transfer price for each unit for 2,000 units of S, if the total labour hours available in Division A are:

(i) 24,000 hours?

(ii) 32,000 hours? **[14]**

4. (a) An exporter of garments is earning a profit of ₹1,00,000 on a sale of ₹12,00,000. Selling price is ₹40 per garment and variable cost is ₹30 per garment. The exporter incurs an additional fixed cost of ₹3,00,000 on product improvement which also enables him to economies ₹5 in per garment variable cost.

As per trade agreements, the sale of his garments is restricted to the old value of ₹12,00,000. Evaluate the selling price per garment so that the exporter earns the same profit at the same sales value. **[7]**

(b) Susma Products Co. Ltd. manufactured and sold in a year 15,000 units of a particular product fetching a sales value of ₹15 lakhs. After charging direct material @ 30% on sales value, direct labour 20% on sales value, variable overheads ₹10 per unit, the company earned profit of ₹16.67% per unit during the year. The existing equipment can produce a maximum of 20,000 units per annum. In case, the demand exceeds the maximum output, new equipment will be required which will cost ₹10lakhs and it will have a life span of 10years, with no residual value.

A prospective customer is willing to place an order on the company for 10,000 units per year regularly at 90% of the present selling price, which will be, if accepted, over and above the existing market for 15,000 units.

Irrespective of the fact whether or not the new order materializes, the cost increases with immediate effect are:

a. 10% in the Direct Materials.

b. 25% in the Direct Labour.

c. ₹50,000 in Fixed Overheads per year.

If the order of additional 10,000 units is accepted, the fixed overhead will increase by another

₹50,000 by way of increased administration expenses.

You are required to recommend whether the company should accept the new business at the stipulated price or decline the new offer and make a concerted sales drive to sell the present unused capacity at the present selling price? The sales drive will cost ₹60,000 per year.

Ignore the financial charges on the cost of the equipment and assume there is no opening and closing inventories.

Variable costs will increase in direct proportion to the output. **[7]**

5. Calculate Labour Variances from the following data:
Standard:
Number in the gang 80 Men and 40 Women
Wage Rate per hour: ₹45 for man and ₹40 for woman
Output per gang hour: 50 Units
Gang-hours in a five-day week: 40
Actual:
Number in the gang: 64 Men and 56 Women
Wage Rate per hour: ₹50 for a Man and ₹25 for a Woman
Actual gang hours paid for: 40
Actual gang hours worked: 39
Actual output: 2400 Units **[14]**

6. **(a)** Z Limited manufactures a standard product. The standard mix of it is:
Material X: 60% at ₹15 per kg.
Material Y: 40% at ₹10 per kg.
Normal loss in output is 20 percent of input due to shortage of material Y.
The actual results for May, 2023 were:
Material X: 210 kg at ₹16 per kg.
Material Y: 190 kg at ₹10.50 per kg.
Actual output: 330 kg.
You are required to calculate:
(i) Material Cost Variance
(ii) Material Price Variance
(iii) Material Usage Variance
(iv) Material Mix Variance
(v) Material Yield Variance. **[7]**

(b) Zee Co. Ltd. wishes to arrange overdraft facilities with its bankers from the period August to October 2022 when it will be manufacturing mostly for stock. Prepare a cash budget for the above period from the following data given below:

Month	Sales	Purchases	Wages	Manufacturing Exp.	Office Exp.	Selling Exp.
June	1,80,000	1,24,800	12,000	3,000	2,000	2,000
July	1,92,000	1,44,000	14,000	4,000	1,000	4,000
August	1,08,000	2,43,000	11,000	3,000	1,500	2,000
September	1,74,000	2,46,000	12,000	4,500	2,000	5,000
October	1,26,000	2,68,000	15,000	5,000	2,500	4,000
November	1,40,000	2,80,000	17,000	5,500	3,000	4,500
December	1,60,000	3,00,000	18,000	6,000	3,000	5,000

Additional Information:

(a) Cash on hand 1-08-2022 ₹25,000.

(b) 50% of credit sales are realized in the month following the sale and the remaining 50% in the second month following. Creditors are paid in the month following the month of purchase.

(c) Lag in payment of manufacturing expenses half month.

(d) Lag in payment of other expenses one month. **[7]**

7. **(a)** ABC Ltd. has provided the following data for the Financial Year ending 31.3.2024:

Liabilities	₹ In lakhs	Assets	₹ In lakhs
Share Capital	1,000	Fixed Assets	3,000
Reserve & Surplus	2,000	Investments	150
Long Term Debt	200	Current Assets	100
Trade Payables	50		
	3,250		3,250

Additional information provided is as follows:

Profit before Interest and Tax is : ₹1,000 lakhs
Interest is : ₹20 lakhs
Tax Rate : 35.875%
Risk Free Rate : 10%
Market Rate : 15%
Beta (β) factor : 1.4

Calculate the Economic Value Added. **[7]**

(b) A firm received an order to make and supply eight units of standard product which involves intricate labour operations. The first unit was made in 10 hours. It is understood that this type of operations is subject to 80% learning rate. The workers are getting a wage rate of ₹12 per hour.

(i) What is the total time and labour cost required to execute the above order?

(ii) If a repeat order of 24 units is also received from the same customer, what is the labour cost necessary for the second order? **[7]**

8. (a) The following information is available for a Company:

Sales Volume (units)	Probability (%)
10,000	10
12,000	15
14,000	25
16,000	30
18,000	20

Projected sales and costs are as under:

Sales Price per unit: ₹6;

Variable Cost per unit: ₹3.50;

Fixed Costs: ₹34,000 **[7]**

(b) List the characteristics of responsibility reporting**.** **[7]**