INTERMEDIATE EXAMINATION
SET 1

MODEL QUESTION PAPER

PAPER - 12

MANAGEMENT ACCOUNTING

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

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

Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.

Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

SECTION - A

(Compulsory)

1. (a) Choose the correct alternative **[1 × 12 = 12]**

(i) _____________ is the study of managerial aspects of financial accounting.

a. Cost accounting

b. Financial accounting

c. Management accounting

d. Business accounting

(ii) Just-in-time inventory management and Activity based costing were developed during the __________.

a. 1st stage

b. 2nd stage

c. 3rd stage

d. 4th stage

(iii) In an ABC system, the allocation bases that are used for applying costs to services or procedures are called:

a. Cost Pool

b. Cost Drivers

c. Cost Absorption

d. Cost Object

(iv) Which of the following would not be deducted from sales in a management report prepared using ABC?

a. Direct materials

b. Direct labour

c. Variable selling and administration costs

d. Shipping costs

(v) ____________ an item for which cost measurement is required e.g. product, job or a customer.

a. Cost Pool
b. Cost Driver
c. Cost Absorption
d. Cost Object

(vi) Which of the following criterion is not used for decision-making under uncertainty?

a. Maximin
b. Maximax
c. Minimax
d. Maximise expected value

(vii) Circumstances that influence the profitability of a decision are referred to as ____________.

a. Strategies
b. A payoff matrix
c. States of nature
d. the marginal utility of money

(viii) In a responsibility accounting system, managers are accountable for:

a. Incremental costs.
b. Product costs but not for period costs.
c. Costs over which they have control.
d. Variable costs but not for fixed costs.

(ix) A company has two divisions. The divisions are identical in terms of the number and type of machines they have and the operations they carry out. However, one division was set up four years ago and the other was set up one year ago. Head office appraises the division using both return on the investment (ROI) and residual income (RI). Which of the following statements is correct in relation to the outcome of the appraisal for each division?

a. Both ROI and RI will favour the older division
b. ROI will favour the older division, but RI will treat each fairly
c. RI will favour the newer division and ROI will favour the older division
d. Both RI and ROI will favour the newer division

(x) Which of the following would be an argument for the use of net book value in the computation of operating assets in return on investment calculations?

a. It allows the manager to replace old, worn- out equipment with a minimum adverse impact on ROI.

b. It allows ROI to decrease over time as assets get older.

c. It is consistent with how plant and equipment items are reported on the balance sheet.

d. It eliminates both age of equipment and method of depreciation as factors in ROI computations.

(xi) Production at 60% activity is ₹ 600 units, if flexible budget needs to be calculated at 80% activity what will be units produced?

a. ₹ 800

b. ₹ 600

c. ₹1200

d. ₹ 1000

(xii) In which of the following circumstances is there a strong argument that profit centre accounting is a waste of time?

a. When the transferred item is also sold on an external market.

b. When the supplying division is based in a different country to head office.

c. If the transferred item is a major product of the supplying division.

d. If there is no similar product sold on an external market and the transferred item is a major product of the supplying division.

(b) State True or False: [1 × 7 = 7]

(i) Globalization and the rapid growth of international trade has made inter-company pricing an everyday necessity for the vast majority of businesses.

(ii) Divisional Autonomy is the degree of freedom a division manager can exercise in decisions making.

(iii) The Budget manual is a schedule, document or booklet, which shows in a written form, the budgeting organization and procedure.

(iv) If the occurrence or non-occurrence of one event does not change the probability of the occurrence of the other event, the two events are said to be independent.

(v) Benchmarking is a process of measuring the performance of a company's products, services, or processes against those of another business considered to be the best in the industry.

(vi) ABC recognizes the increased complexity of modern businesses with its multiple cost drivers, many of which are transaction based rather than volume based.

(vii) A revenue centre is strictly defined as an organizational unit that is responsible for the generation of revenues and has full control over setting selling prices or budgeting costs.

(c) Fill in the blanks: **[1 × 6 = 6]**

(i) Transfer prices based on full cost are appropriate if top management treats the divisions like_______________.

(ii) If the selling division has, ________a transfer price based on __________would be an appropriate transfer price, although it would hurt the performance of the selling division.

(iii) lean manufacturing systems that seek to reduce waste by implementing __________ production systems and focussing on ___________.

(iv) There has been a paradigm shift in the role of the management accountant in the era of globalisation. The focus shifted to ______________.

(v) If a decision maker can estimate the ______________ of the future events, these should be incorporated into the decision model.

(vi) Under marginal costing, the stock is valued at _________ .

SECTION - B
(answer any five questions)

2. (a) Discuss the role of a management accountant in contemporary business eco system. **[7]**

(b) ABC Company manufactures three products: A, B, and C. Data for the period just ended is as follows:

	A	B	C
Production (units)	20000	25000	2000
Sales price (per unit)	₹ 20	₹ 20	₹ 20
Material cost (per unit)	₹ 5	₹ 10	₹ 10
Labour hours (per unit)	2 hours	1 hour	1 hour

Overheads for the period were as follows:

	₹
Set-up costs	90,000
Receiving	30,000
Despatch	15,000
Machining	55,000
	1,90,000

Cost driver data	**A**	**B**	**C**
Machine hours per unit	2	2	2
Number of set-up	10	13	2
Number of deliveries received	10	10	2
Number of orders dispatched	20	20	20

As a cost accountant you are required to

(i) Calculate the cost and profit per unit, absorbing all the overheads on the basis of labour hours.

(ii) Calculate the cost and profit per unit absorbing the overheads using an Activity Based Costing approach. **[4+4 =8]**

3. (a)

I. The following data has been extracted from the cost records of CYTOGEN Inc.For a particular period, the Sales revenue is ₹ 2,00,000 and the profit is ₹ 20,000. If it is known that the variable Cost ratio is 60% you are required to calculate:

(i) the Contribution to Sales Ratio

(ii) the Fixed Cost and

(iii) the Sales volume to earn a profit of ₹ 50,000

II. What do you mean by Angle of Incidence in a Break-Even Chart? Can it be used in managerial decision making? **[4+4 =8]**

(b) An exporter of auto machine parts is earning a profit of ₹ 1,00,000 on a sale of ₹ 12,00,000. Selling price is ₹ 40 per part and variable cost is ₹. 30 per part. The exporter incurs an additional fixed cost of ₹. 3,00,000 on product improvement which also enables him to economise ₹ 5 in per part variable cost. As per trade agreements, the sale of his parts is restricted to the old value of ₹ 12,00,000. Determine the selling price per part so that the exporter earns the same profit at the same sales value? **[7]**

4. (a) A company has two divisions, X and Y. Division X manufactures a component which is used by Division Y to produce a finished product. For the next period, output and costs have been budgeted as follows.

Particulars	Division X	Division Y
Component units	50,000	
Finished units		50,000
Total variable costs	₹ 2,50,000	₹ 6,00,000
Fixed Costs	₹ 1,50,000	₹ 2,00,000

You, as a cost accountant, are required to advise on the transfer price to be fixed for Division X's component under the following circumstances:

(i) Division X can sell the component in a competitive market for₹10 per unit. Division Y can also purchase the component from the open market at that price.

(ii) Further to the situation mentioned in (i) above, assume that Division Y currently buys the component from an external supplier at the market price of ₹10 and there is reciprocal agreement between the external supplier and another Division Z, within the same group. Under this agreement, the external supplier agrees to buy one product unit from Division Z at a profit of ₹4 per unit to that division, for every component which Division Y buys from the supplier. **[3 + 4 = 7]**

(b) As a Management Accountant of Bush Radio Company you find that while it costs ₹ 12.50 to make a component X, the same is available in the market at ₹ 11.50 with an assurance of continued supply. The break-down of the cost is:

Elements of cost	₹
Materials	₹ 5.50
Labour	₹ 3.50
Other variable overheads	₹ 1.00
Depreciation & other fixed cost	₹ 2.50
Total Cost	₹ 12.50

a. Analyse the above situation and submit the needful cost related information to enable the management to take a make or buy decision?

b. Examine the possibility of accepting an offer of ₹ 9.70 each per unit received from the supplier. **[4 + 4 = 8]**

5. (a) LOTUS Inc has reported annual operating profits for the year of ₹ 89.2 million after charging ₹ 9.6 million for the full development costs of a new product that is expected to last for the current year and two further years. The cost of capital is 13 per cent per annum. The balance sheet for the company shows fixed assets with a historical cost of ₹ 120 million. A note to the balance sheet estimates that the replacement cost of these fixed assets at the beginning of the year is ₹ 168 million. The assets have been depreciated at 20 per cent per year. The company has a working capital of ₹ 27.2 million. Ignore the effects of taxation.

You as a cost accountant is asked to calculate the economic valued added (EVA) of the company. **[7]**

(b) (i) Carson, Inc., uses a learning curve of 80 percent for all new products it develops. A trial run of 500 units of a new product shows total labour-related costs (direct, indirect labour, and fringe benefits) of ₹ 1,20,000. Management plans to produce 1,500 units of the new product during the next year.

Compute the expected labour-related costs for the year to produce the 1,500 units.

Find the unit cost of production for next year.

(ii) State the limitations and the problems associated with learning curve analysis. **[5 + 3 = 8]**

6. (a) 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 **[8]**

(b) When the financial controller of Better Company set the budget for the year ahead, it was expected that monthly output of cake packages would be 12,000 units. In March the output was increased to 14,000 per month following negotiation with a chain of corner shops. The following table contains the original budget and the actual outcome for the month of March.

Particulars Original Budget Actual for March

	Amount (₹.)	**Amount (₹.)**
Cake packages output	12,000	14,000
Direct materials	48,000	53,000
Direct labour	24,000	29,000
Variable overhead	6,000	7,200
Fixed overhead	4,000	4,500
Total production costs	82,000	93,700

The Financial Controller wants you to analyse the variances in order to prepare a report. **[7]**

7. (a) AB Ltd. has furnished the following information:

	Budgeted	**Actual (for March 2023)**
Number of working days	25	27
Production (in Units)	20000	22000
Fixed Overheads	₹ 30000	₹ 31000

Budgeted fixed overhead rate is ₹ 1.00 per hour. In March 2023, the actual hours worked were 31500.

Calculate:

(i) Fixed overhead Efficiency Variance

(ii) Fixed overhead Capacity Variance

(iii) Fixed overhead Calendar Variance
(iv) Fixed overhead Volume Variance
(v) Fixed overhead Expenditure Variance **[7]**

(b) SK Limited makes and sells a single product 'Jay' for which the standard cost per unit is as follows;

		₹ per unit
Direct Material	4 kg @ ₹ 12.00 per kg	48.00
Direct Labour	5 hours @ ₹ 7.00 per hour	35.00
Variable production overhead	5 hours @ ₹ 2.00 per hour	10.00
Fixed production overhead	5 hours @ ₹ 10.00 per hour	50.00
		143.00

The variable production overhead varies with the hours worked. Overhead is absorbed into production on the basis of standard hours of production and the normal volume of production for the period just ended was 20 000 units (100 000 standard hours of production).

For the period under consideration, the actual results were;

Production of 'Jay'	**18000 units (₹)**
Direct material used – 76000 kg at a cost of	8,36,000
Direct labour cost incurred – for 84000 hours worked	6,04,800
Variable production overhead incurred	1,72,000
Fixed production overhead incurred	10,30,000

You are required

(i) to analyse and show, by element of cost, standard cost for the output for the period;

(ii) to scrutinize and list relevant variances in a way which reconciles standard cost with actual cost;

(Note: Fixed production overhead sub-variances of capacity and volume efficiency (productivity) are not required); **[2 + 6 = 8]**

8. (a) Farmer Visal can plant either corn or soybeans. The probabilities that the next harvest prices will go up, stay the same, or go down are 0.25, 0.30, and 0.45, respectively. If the prices go up, the corn crop will net ₹ 30,000 and the soybeans will net ₹ 10,000. If the prices remain unchanged, McCoy will (barely) break even.

But if the prices go down, the corn and soybeans crops will sustain losses of ₹ 35,000 and ₹ 5000, respectively.

(i) Represent McCoy's problem as a decision tree.

(ii) Suggest Visal on the crop that he should plant. **[7]**

(b) For the upcoming planting season, farmer Visal can plant corn (A1), wheat (A2), or soybeans (A3) or use the land for grazing (A4). The payoffs associated with the different actions are influenced by the amount of rain: heavy rainfall (S1), moderate rainfall (S2), light rainfall (S3), or drought (S4). The payoff matrix (in thousands of rupees) is estimated as;

	S1	**S2**	**S3**	**S4**
A1	-20	60	30	-5
A2	40	50	35	0
A3	-50	100	45	-10
A4	12	15	15	10

Develop a course of action for farmer Visal based on each of the four decision criterion under uncertainty. **[8]**