

Roll No.

Total No. of Questions – 6

Total No. of Printed Pages – 12

Time Allowed – 3 Hours

Maximum Marks – 100

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Answers to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Answer any four questions from the remaining five questions.

Working notes should form part of the respective answers.

No statistical or other table will be provided with this question paper.

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1. JK Ltd., is following Life Cycle Costing. Its four products P_4 , P_3 , P_2 and P_1 are in the market respectively in Introduction, Growth, Maturity and Decline stages (phases). The Management wants to analyse the marketing challenges faced by the products to take strategical measures to stabilise the products in the market. For this purpose the Board directed the Secretary to get a product-wise report from the marketing chief of each product. The chiefs were asked to give one characteristic possessed by the product because of which the product is being classified in the respective stage and two strategical measures to be taken to overcome the market challenges faced at that stage (phase). The Secretary received the report from all the chiefs and handed them over to the computer operator to get it printed in a tabulated form. But the operator, without understanding the significance of the products, phases, characteristics and strategies, mixed all the twelve items $[(1 + 2) \times 4]$ and got it printed as a list as given below :

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- (i) Over capacity in the industry.
- (ii) The company can continue to offer the product to our loyal customers at a reduced price.
- (iii) Few competitors produce basic version of our product.
- (iv) Product features may be improved or enhanced to differentiate our product from that of the competitors.
- (v) Attracting customers by raising awareness about our product through promotion activities.
- (vi) High volume of business and increase in competition.
- (vii) Use the present product as replacement product for launching another new product successfully in the market.
- (viii) Value-based pricing strategies may be considered.
- (ix) Profits start declining and at times become negative.
- (x) Maintain control over product quality to assure customer satisfaction.
- (xi) Strengthening or expanding channel and supply chain relationships.
- (xii) Prices may have to be reduced to attract the price-sensitive customers.

The items are required to be tabulated as in the format given below :

Required :

- (i) Complete the table given below by entering the twelve items under appropriate category columns. You need not rewrite the items. Write the serial numbers of the items only in columns (3) and (4).

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4+8
=12

Products (1)	Phases (Stages) (2)	Characteristics (3)	Strategies (4)
P ₄	Introduction		
P ₃	Growth		
P ₂	Maturity		
P ₁	Decline		

(ii) List down the importance (any four) of Product Life Cycle Costing. 4

(iii) State the benefits (any four) of Product Life Cycle Costing. 4

2. Zen Ltd., forms a Committee consisting of its Production, Marketing and Finance Directors to prepare a budget for the next year. The Committee submits a draft budget as detailed below :

Selling price per unit		₹ 50
Direct material cost per unit	₹ 9	
Direct labour cost per unit	₹ 9	
Variable overhead (3 hrs. @ ₹ 2)	₹ 6	24
Contribution per unit		26
Budgeted sales quantity		25,000 units
Budgeted contribution (25000 × 26)		6,50,000
Budgeted Fixed Cost		<u>5,00,000</u>
Budgeted Profit		<u>1,50,000</u>

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The Management is not happy with the budgeted profit as it is almost equal to the previous year's profit. Therefore, it asks the Committee to prepare a budget to earn at least a profit of ₹ 3,00,000. To achieve the target profit, the Committee reports back with the following suggestions :

The unit selling price should be raised to ₹ 55.

The sales volume should be increased by 5000 units.

To attain the above said increase in sales, the company should spend ₹ 40,000 for advertising.

The production time per unit should be reduced.

To win the acceptance of the workers in this regard the hourly rate should be increased by ₹ 3 per unit besides an annual group bonus of ₹ 30,000.

There is no change in the amount and rates of other expenses. The company has sufficient production capacity.

As the implementation of the above proposal needs the acceptance of the work force to increase the speed of work and to reduce the production time per unit, the Board wants to know the extent of reduction in per unit production time.

Required :

- (i) Calculate the target production time per unit and the time to be reduced per unit. 14
- (ii) Identify the other problems that may arise in production due to decrease in unit production time and also suggest the remedial measures to be taken. 4
- (iii) State the most suitable situation for the adoption of Target Costing. 2

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3. Fast Cook Ltd., is a pressure cooker manufacturing company doing business through wholesalers and retailers. The company is following Activity Based Costing system. Average cost per cooker is ₹ 600 and the listed price is ₹ 1000. But cookers are sold at a discount of 25% on listed price on orders for above 200 units and at a discount of 20% on orders for 200 units or less. The company wants to analyse the profitability of two of its wholesale customers A and B and two of its retail customers X and Y on the basis of the business with them during last year. This is to explore the opportunities to increase the profitability from the customers. The relevant data pertaining to the last year are given below :

Customer	A	B	X	Y
No. of purchase orders	50	65	230	270
No. of cookers purchased per order	500	300	40	30
No. of visits to customers place	10	15	25	22
No. of ordinary deliveries	45	50	175	200
No. of speed deliveries	5	15	50	65

The activity, cost driver and the rate are as follows :

Activity	Cost Driver	Cost per unit of Driver ₹
Order processing	No. of purchase orders	1,300
Visiting customers	No. of customers visited	7,400
Ordinary delivery	No. of ordinary deliveries	2,000
Speed delivery	No. of speed deliveries	6,000

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Required :

- (i) Evaluate the customer profitability by calculating the profit per cooker from each customer. **12**
- (ii) Recommend steps to be taken to improve profitability from less profitable customers. **4**
- (iii) List down the service organisations for which customer profitability analysis is useful. **2**
- (iv) Explain the specific benefits of customer profitability analysis. **2**

4.

- (a) Cool Air Ltd., manufactures and sells 25000 table fans annually. One of the components required for fans is purchased from an outside supplier at a price of ₹ 190 per unit. Annually it is purchasing 25000 components for its usage. The Production Manager is of the opinion that if all the components are produced at own plant, it is possible to maintain better quality in the finished product. Further, he proposed that the in-house production of the component with other items will provide more flexibility to increase the annual production by another 5000 units. He estimates the cost of making the component as follows :

	₹ per unit
Direct materials	80
Direct labour	75
Factory overhead (70% variable)	40
Total Cost	195

The proposal of the Production Manager was referred to the Marketing Manager for his remarks. He pointed out that to market the additional units, the overall unit price should be reduced by 5% and additionally ₹ 1,00,000 p.m. should be incurred for advertising. Present selling price and contribution per fan are ₹ 2,500 and ₹ 600 respectively. No other increase or decrease in all other expenses as a result of this proposal will arise.

Since the making cost of the component is more than the buying cost, the Management asks you to :

- | | |
|---|---|
| (i) analyse the make or buy decision on unit basis and total basis. | 8 |
| (ii) recommend the most profitable alternative. | 2 |

- (b) The Board of Directors meeting of T.K. Motors Ltd., a car manufacturing company is to be scheduled to be held in another ten days. One of the items, as per agenda, to be discussed in the meeting is the present budgeting system of the company. Your organisation is at present, using budgets for control which are prepared mostly on traditional basis. The CEO of your company wants to propose to the Board to use Beyond Budgeting instead of traditional budgeting in the company on experimental basis. Therefore, you, the Management Accountant has been asked by your CEO to explore the possibilities of introducing Beyond Budgeting (BB) system in the company. Specifically, you are required to prepare notes to your CEO to be used for his presentation at the meeting on :

- (i) the major limitations of traditional budgets.
- (ii) the advantages available in Beyond Budgeting.
- (iii) the nature of Beyond Budgeting.
- (iv) the benefits that can be enjoyed from Beyond Budgeting.
- (v) The suitability of Beyond Budgeting to the company.

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5. (a) Sun Chemicals Co., is engaged in manufacturing many chemical products. It is using many chemicals some of which are fast moving, some are slow moving and few are in non-moving category. The company has a stock of 10 units of one non-moving toxic chemical. Its book value is ₹ 2,400, realizable value is ₹ 3,500 and replacement cost is ₹ 4,200.

One of the customers of the company asks to supply 10 units of a product which needs all the 10 units of the non-moving chemical as an input. The other costs associated with the production of the product are :

Allocated overhead expenses ₹ 16 per unit

Out of pocket expenses ₹ 50 per unit

Labour cost ₹ 40 per hour. For each unit two hours are required.

Other material cost ₹ 80 per unit.

The labour force required for the production of the product will be deployed from among the permanent employees of the company. This temporary deployment will not lead to any loss of contribution.

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Required :

- (i) Recommend the minimum unit price to be charged to the customer without any loss to the company. 4
- (ii) Analyse with reasons for the inclusion or exclusion of each of the cost associated with the production of the product. 4
- (iii) Advice a pricing policy to be followed by Sun Chemical in perfect competition. 2
- (b) Apple Ltd., is following three variances method to analyse and understand production overhead variances. The three variances for a particular year were reported as given below :

₹

Production overhead expenditure variance	94,000 A
Production overhead volume variance	1,00,000 F
Production overhead efficiency variance	48,000 F

The other particulars furnished from the records of the company are :

Standard machine hours for the year	11500
Closing balance in the production Overhead Control Account	₹ 18,00,000
Fixed overhead rate per hour	₹ 125
Variable overhead rate per hour	₹ 80

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Required :

Compute the following by considering the additional information also :

- (i) Actual machine hours **AH**
- (ii) Budgeted machine hours **BH**
- (iii) Total Fixed Production Overhead amount ✓
- (iv) Applied Production Overhead amount

10**Additional Information :**

- Expenditure variance was computed totally for fixed and variable overheads.
- Volume variance is applicable to fixed overhead only.
- Efficiency variance is applicable only to variable overhead and fixed overhead efficiency variance was already included in volume variance.

6. (a) Usha Products Co. operates a Pulp Division that manufactures Wood Pulp for use in the production of various paper goods. The following informations are available :

	₹
Selling Price	210
Less : Variable Expenses	126
Contribution	84
Less : Fixed Expenses	54
(Based on a capacity of 100000 kgs per year)	
Net Income	30

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Usha Products has just acquired a small company that manufactures paper cartons. This company will be treated as a division of Usha with full profit responsibility. The newly formed Carton Division is currently purchasing 10,000 kgs of pulp per year from supplier at a cost of ₹ 210 per kg. less a 10% quantity discount. Usha's President is anxious that the Carton Division begins purchasing its pulp from the Pulp Division if an acceptable transfer price can be worked out.

Required : (Answer any 2 items from situations I, II and III below)

Situation I

If the Pulp Division is in a position to sell all of its pulp to outside customers at the normal price of ₹ 210 per kg, will the Managers of the Carton and Pulp Division agree to transfer 10,000 kgs of pulp next year at a determined price ? Explain with reasons.

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Situation II

Assuming that the Pulp Division is currently selling only 60,000 kgs of pulp each year to outside customers at the stated price of ₹ 210 per kg, will the Managers agree to a mutually acceptable transfer price for 10,000 kgs of pulp in next year ? Explain with reasons.

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Situation III

If the outside supplier of the Carton Division reduces its price to ₹ 177 per kg, will the Pulp Division meet this price ? Explain. If the Pulp Division does not meet the price of ₹ 177 per kg, what will be the effects on profits of the company as a whole ?

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- (b) A Company manufactures a single product, which requires three components. The company purchases one of the components from three supplier. DJ Ltd., PJ Ltd. and ZJ Ltd. The following informations are available :

	DJ Ltd.	PJ Ltd.	ZJ Ltd.
Price quoted by supplier (per hundred units)	₹ 240	₹ 234	₹ 260
% of Defective of total receipts	3%	5%	2%

If the defectives are not detected they are utilized in production causing a damage of ₹ 200 per 100 units of the component. Total requirements is 12000 units of the components.

The company intends to introduce a system of inspection for the components on receipt. The inspection cost is estimated at ₹ 26 per 100 units of the components. Such as inspection will be able to detect only 90% of the defective components received. No payment will be made for components found to be defective in inspection.

Required :

- (i) Advice whether inspection at the point of receipt is justified. 8
- (ii) Which of the three supplier should be asked to supply ? 2

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