



FINAL EXAMINATION
MODEL QUESTION PAPER
PAPER – 16

SET - 1
TERM – JUNE 2024
SYLLABUS 2022

STRATEGIC COST MANAGEMENT

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 x 2=30]

- (i) Which of the following is not a secondary activity of Value Chain?
- Procurement
 - Human Resource Development
 - Service
 - Technology Development
- (ii) The break-even point of a manufacturing company is ₹1,60,000. Fixed cost is ₹48,000. Variable cost is ₹12 per unit. The PV ratio will be:
- 20%
 - 40%
 - 30%
 - 25%
- (iii) The higher the actual hours worked _____.
- The lower the capacity usage ratio.
 - The higher the capacity usage ratio.
 - The lower the capacity utilization ratio.
 - The higher the capacity utilization ratio.
- (iv) The Tech Company has fixed costs of ₹ 400,000 and variable costs are 75% of the selling price. To realize profits of ₹ 100,000 from sales of 5,00,000 units, the selling price per unit _____.
- must be ₹1.00
 - must be ₹4.80
 - must be ₹4.00
 - cannot be determined
- (v) X Ltd. has 1000 units of an obsolete item which are carried in inventory at the original price of ₹ 50,000. If these items are reworked for ₹ 20,000, they can be sold for ₹ 36,000. Alternatively, they can be sold as a scrap for ₹ 6,000 in the market. In a decision model used to analyse the reworking proposal, the opportunity cost should be taken as _____.



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- a) ₹ 16,000
- b) ₹ 6,000
- c) ₹ 30,000
- d) ₹ 20,000

(vi) A Ltd. Plans to introduce a new product and issuing the target cost approach. Projected sales revenue is ₹ 90,00,000 (₹45 per unit) and target costs are ₹ 64,00,000. What is the desired profit per unit?

- a) ₹ 13
- b) ₹ 17
- c) ₹ 32
- d) ₹ 10

(vii) AP Products sells product A at a selling price of ₹40 per unit. AP's cost per unit based on the full capacity of 5,00,000 units is as follows:

Direct material	6
Direct Labour	3
Indirect Manufacturing Expense 60% of which is fixed	10
Total	19

A one-time only special order offering to buy 50,000 units was received from an overseas distributor. The only other costs that would be incurred on this order would be ₹ 4 per unit for shipping. AP has sufficient existing capacity to manufacture the additional units. In negotiating a price for the special order, AP should consider that the minimum selling price per unit should be _____.

- a) ₹ 17
- b) ₹ 19
- c) ₹ 21
- d) ₹ 23

(viii) Ankit Ltd., operates throughput accounting system. The details of product A per unit are as under:

Selling Price: ₹ 75

Material Cost: ₹ 30

Conversion Cost: ₹20

Time to bottleneck resources: 10 minutes

What is the throughput contribution per bottleneck resource per hour?

- a) ₹ 270
- b) ₹ 150
- c) ₹ 120
- d) ₹ 90



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- (ix) Efficiency Ratio is _____.
- a) Available working days ÷ Budgeted working days × 100
 - b) Budgeted hours ÷ Maximum hours in budgeted period × 100
 - c) Standard hours ÷ Actual hours × 100
 - d) None of the above
- (x) Which of the following statement is incorrect?
- a) Microsoft Excel is most popular among all the available spreadsheets.
 - b) Zoho Analytics is a tool used for Financial Data analysis.
 - c) Visualisation Tools are the Reporting Tools.
 - d) None of the above.
- (xi) Prescriptive Analytics is very important because –
- a) It tells about the action to be taken.
 - b) It tells about what is likely to happen.
 - c) It tells about how something has happened.
 - d) It tells about what has happened.
- (xii) The information relating to the direct material cost of a company is as follows:
Standard price per unit ₹7.20
Actual quantity purchased in units 1600
Standard quantity allowed for actual production in units 1450
Material price variance on purchase (Favourable) ₹480 What is the actual purchase price per unit?
- a) ₹ 7.50
 - b) ₹ 6.40
 - c) ₹ 6.5
 - d) ₹ 6.90
- (xiii) The Normal duration and Normal cost of an activity are respectively 10 days and ₹ 350. The cost slope is ₹ 75 per day. If the Crash duration is 8 days then what is the Crash cost of the activity?
- a) ₹ 400
 - b) ₹ 500
 - c) ₹ 600
 - d) ₹ 650
- (xiv) Optimization is the method of finding _____.
- a) The maximum point
 - b) The minimum point
 - c) The critical point
 - d) All of the above



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- (xv) The actual demand for a period is 100 units. But forecast demand was 90 units. The forecast error is –
- 10
 - 10
 - 5
 - None of the above

SECTION – B

(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)

[5 x 14 = 70]

2. A manufacturing company currently operating at 80% capacity has received an export order from Middle East, which will utilise 40% of the capacity of the factory. The order has to be either taken in full and executed at 10% below the current domestic prices or rejected totally. The current sales and cost data are given below: **[14]**

Sales	₹ 16.00 lakhs
Direct Material	₹ 5.80 lakhs
Direct Labour	₹ 2.40 lakhs
Variable Overheads	₹ 0.60 lakhs
Fixed Overheads	₹ 5.20 lakhs

The following alternatives are available to the management:

- Continue with domestic sales and reject the export order.
- Accept the export order and allow the domestic market to starve to the extent of excess of demand.
- Increase capacity so as to accept the export order and maintain the domestic demand by:
 - Purchasing additional plant and increasing 10% capacity and thereby increasing fixed overheads by ₹ 65,000, and
 - Working overtime at one and half time the normal rate to meet balance of the required capacity.

Required: Evaluate each of the above alternatives and suggest the best one.

3. (a) Division A is a profit centre which produces three products X, Y and Z. Each product has an external market. The details are as follows:

	X	Y	Z
External market price per unit (₹)	48	46	40
Variable cost of production in division A (₹)	33	24	28
Labour hours required per unit in division A	3	4	2

Product Y can be transferred to Division B, but the maximum quantity that might be required for transfer is 300 units of Y.



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	X	Y	Z
The maximum external sales are:	800 Units	500 Units	300 Units

Instead of receiving transfers of Product Y from Division A, Division B could buy similar product in the open market at a slightly cheaper price of ₹ 45 per unit.

Compute the transfer price for each unit, for 300 units of Y, if the total labour hours available in Division A are?

- (a) 3800 hours
(b) 5600 hours. [7]

- (b) A company has estimated the unit variable cost of a Product to be ₹ 10, and the selling price is ₹ 15 per unit. Budgeted sales for the year are 20,000 units. Estimated fixed costs are as follows:

Fixed Cost p.a.(₹)	50,000	60,000	70,000	80,000	90,000
Probability	0.1	0.3	0.3	0.2	0.1

Assess the probability that the company will equal or exceed its target profit of ₹ 25,000 for the year? [7]

4. (a) T Ltd, produces a product which passes through two processes - cutting and finishing. The following information is provided: [7]

	Cutting	Finishing
Hours available per annum	50,000	60,000
Hours needed per unit of product	5	12
Fixed operating costs per annum excluding direct material (₹)	10,00,000	10,00,000

The selling price of the product is ₹ 1,000 per unit and the only variable cost per unit is direct material, which costs ₹ 400 per unit. There is demand for all units produced.

Evaluate each of the following proposals independent of each other:

- (i) An outside agency is willing to do the finishing operation of any number of units between 5,000 and 7,000 at ₹ 400 per unit.
(ii) Another outside agency is willing to do the cutting operation of 2,000 units at ₹ 200 per unit
(iii) Additional equipment for cutting can be bought for ₹ 10,00,000 to increase the cutting facility by 50,000 hours, with annual fixed costs increased by ₹ 2 lakhs.
- (b) Discuss the significance of lean accounting. [7]

5. Compute the missing data indicated by the Question marks from the following: [14]

	Product 'R'	Product 'S'
Sales quantity		
Std.(units)	?	400
Actual (Units)	500	?
Price (Unit)		
Standard	₹ 12	₹ 15
Actual	₹ 15	₹ 20
Sales price variance	?	?



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Sales volume variance	₹ 1,200 F	?
Sales value variance	?	?

Sales mix variance for both the products together was ₹ 450 F. 'F' denotes Favorable.

6. (a) The past data of demand per week (in '00 kgs.) of a confectionery item is given below –

Demand/Week	0	5	10	15	20	25
Frequency	2	11	8	21	5	3

Using the sequence of random numbers – 35, 52, 13, 90, 23, 73, 34, 57, 35, 83, 94, 56, 67, 66 generate the demand for the next 10 weeks. Also determine the average demand per week

[7]

- (b) A retired person has plans to invest in shares. He has been suggested by one of his friends who plays in the share market to invest in two shares A and B which gives dividends @ 12% and 4% p.a. respectively. For an investment of ₹ 1, the growth in the market value of the shares A and B are respectively 10 paise and 40 paise in one year. The retired person wants to invest such that the dividend income is at least ₹ 600 p.a. and the growth of initial investment in one year is at least ₹ 1000.

- (i) Formulate it as a Linear Programming Problem.
(ii) Write its Dual.

[7]

7. (a) The following table gives data on normal time & cost as well as crash time & cost for a project.

You need to draw the Network diagram and identify the Critical Path.

Also compute the Normal duration of the project and the corresponding Total Cost associated with it.

Crash the relevant activities systematically and determine the optimum completion time of the project. Also determine the corresponding cost when it is given that the Indirect Cost is ₹100 per day.

[7]

Activity	Normal		Crash	
	Time (days)	Cost (₹)	Time (days)	Cost (₹)
1—2	6	600	4	1,000
1—3	4	600	2	2,000
2—4	5	500	3	1,500
2—5	3	450	1	650
3—4	6	900	4	2,000
4—6	8	800	4	3,000
5—6	4	400	2	1,000
6—7	3	450	2	800

- (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 operation is subject to an 80% learning rate. The workers are getting wages at the 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, calculate the labour cost necessary for the second order.

[7]



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8. (a) Is the following two persons, zero – sum game stable? (the payoff is for player A). solve the game:

Player B

$$\text{Player A} \begin{bmatrix} 5 & -10 & 9 & 0 \\ 6 & 7 & 8 & 1 \\ 8 & 7 & 15 & 1 \\ 3 & 4 & -1 & 4 \end{bmatrix} \quad [7]$$

- (b) Calculate the Seasonal Indices for the following quarterly data in certain units. Appropriate method for finding the Indices has to be decided by you with due explanation.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2020	39	21	52	81
2021	45	23	63	76
2022	44	26	69	75
2023	53	23	64	84

[7]