

PAPER – 15 : STRATEGIC COST MANAGEMENT – DECISION MAKING

SUGGESTED ANSWERS

SECTION – A

1.

- (i) (A)
- (ii) (C)
- (iii) (D)
- (iv) (D)
- (v) (C)
- (vi) (B)
- (vii) (D)
- (viii) (A)
- (ix) (B)
- (x) (A)

SECTION – B

2. (a)

- (i) The Budgeted life Cycle Operating Income = ₹ 44,00,000
Operating Loss for increase sales by 15% through 10% reduction in selling price = ₹ 50,65,000

(ii) Advice:

Since Reducing the price by 10% will incurred loss of ₹ 50.65 lakh, i.e Profit will decrease by ₹ 94.65 Lakh, the Company should not go for reduction in selling price by 10%.

2 (b)

Minimum price to be charged = ₹ 110

3.

(i)

	3,00,000 tubes		Additional 50,000 tubes		Additional 1,50,000 tubes	
	Make	Buy	Make	Buy	Make	Buy
Cost (₹)	3,82,500	4,05,000	93,750	67,500	2,21,250	2,02,500

If the company increases production to 350000 tubes of UVO, 300000 tubes should be made in the factory and additional 50000 tubes should be purchased at ₹ 67500.

The company increases production to 450000 tubes of UVO, 300000 empty tubes should be made in the factory and additional 150000 tubes should be purchased at a cost of ₹ 202500.

- (ii)** Minimum additional quantity of empty tubes to be made to recover the additional fixed costs = 4,00,000 tubes.

Thus the company should sell 300000 + 400000 = 700000 tubes of UVO per month to warrant justification for the installation of the new machine for the manufacture of empty tubes.

- (iii)** Evaluation of the profitability on sale of UVO at the three levels

	300000 tubes	350000 tubes	450000 tubes
	₹	₹	₹
Sales	3000000	3500000	4500000
Total costs	2925000	3341250	4173750
Profit	75000	158750	326250

4 (a)

- (i) Material Price Variance = ₹ 1137 (A)
- (ii) Material Usage Variance = ₹ 440 (A)
- (iii) Material Yield Variance = ₹ 682 (A)
- (iv) Material mix variance = ₹ 242 (F)
- (v) Material cost variance = ₹ 1,577 (A)

4 (b)

The benefits derived from Inter-firm Comparison are appended below:

Inter-firm Comparison makes the management of the organization aware of strengths and weakness in relation to other organisations in same industry.

- (i) As only the significant items are reported to the Management time and efforts are not unnecessary wasted.
- (ii) The management is able to keep up to date information of the trends and ratios and it becomes easier for them to take the necessary steps for improvement.
- (iii) It develops cost consciousness among the members of the industry.
- (iv) Information about the organisation is made available freely without the fear of disclosure of confidential data to outside market or public.
- (v) Specialized knowledge and experience of professionally run and successful organisations are made available to smaller units who can take the advantages it may be possible for them to have such an infrastructure.
- (vi) The industry as a whole benefits from the process due to increased productivity, standardization of products elimination of unfair comparison and the trade practices.
- (vii) Reliable and collective data enhance the organising power in deal in with various authorities and Government bodies.
- (viii) Inter firm comparison assists in a big way in identifying industry sickness and gives a timely warning so that effective remedial steps can be taken to save the organisation.

5 (a)

- (i) The Manager of Division A should not accept any price below 19.08 per unit. Hence he should not transfer at ₹ 18 per unit.
- (ii) The lowest price is ₹ 19.08 per unit.

Decision:

Manager of Division A should not transfer at ₹ 18 per unit to Division B since it lowers his rate of return.

The lowest transfer price acceptable to A is the one that maintains its rate of return of 23.85% without selling to Division B.

5 (b) :

Net Benefit due to JIT policy ₹ 377200

Conclusion:

The JIT policy for New BOS20 may be implemented, as there is a net benefit of ₹ 377200 per annum.

6. (a)

- (i) Average number of scooters waiting in the factory = 1.4 per day
- (ii) Average number of empty space on the lorry = 0.6 per day

6. (b)

(i) & (ii) The optimal assignment is as shown below:

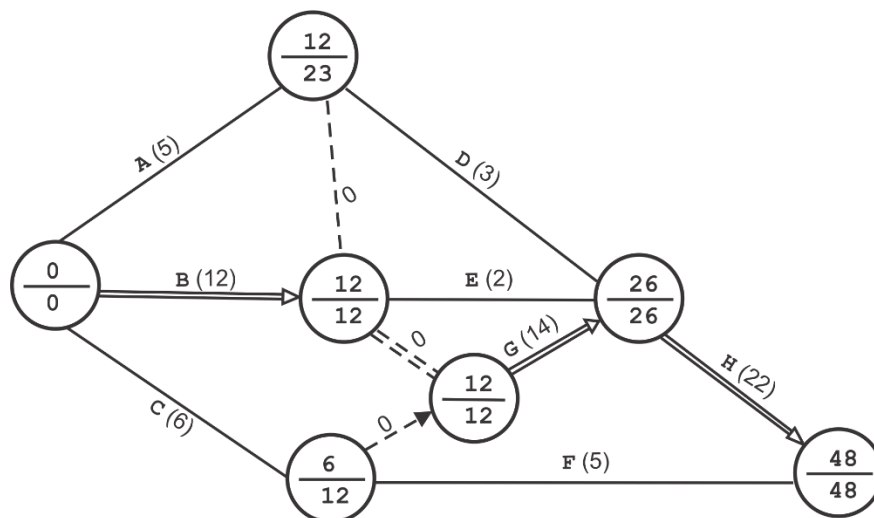
Operator	Product	Profit (₹)
1	D	300
2	B	450
3	C	150
4	A	240
	TOTAL	1140

7 (a)

(i)

Task	Expected task duration
A	5
B	12
C	6
D	3
E	2
F	5
G	14
H	22

(ii)



Critical Path Diagram

Critical Path = $B \rightarrow G \rightarrow H$

Expected Duration = 48 Days.

Standard deviation of overall duration = 3.27 days

(iii) Probability of finishing the Project in 54 days = 96.67 %

(iv) Probability of finishing the Project in 54 days = 92.222 %

This has fallen due to increase variability of the activities on the Critical path.

7 (b)

Let x_1, x_2, x_3 , and x_4 denote the amount of funds to be invested in government bonds, blue Chip Stocks, speculative stocks and short terms deposits respectively. Let Z denote the total expected return.

The linear programming model for the Mutual Fund Company is formulated as below:

Objective Function:

$$\text{Maximize } Z = 0.14 x_1 + 0.19 x_2 + 0.23 x_3 + 0.12 x_4$$

Subject to the Constraints

$$\text{Maximize } x_1 + x_2 + x_3 + x_4 \leq 2000000$$

$$x_4 \geq 200000$$

$$-30 x_1 - 18 x_2 + 6 x_3 - 36 x_4 \leq 0$$

$$-0.2 x_1 - 0.2 x_2 + 0.8 x_3 - 0.2 x_4 \leq 0$$

Where $x_1 \geq 0, x_2 \geq 0, x_3 \geq 0$ and $x_4 \geq 0$

8. (a)

Where Product can be sold below the Marginal Cost:

The Situations where the product can be sold below Marginal Cost are enumerated below :

- (i) When one has already produced and paid for the units and:
 - There is no more market for the product at any price other than the one is below the marginal cost.
 - Any organisation cannot keep the business open to clear the rest of the inventory because any profit you may see is not enough to cover the cost to stay open.
 - As a loss leader to attract customers that can be up sold. Works only if the customer margin- sum of contribution margins from the basket of products and services customers buy is more than other available options.
- (ii) When one has produced each unit on demand (truly marginal)
 - Only case is as a loss leader.
 - Any other reason not only generates a loss in the short term but also sets really bad reference price in the minds of customers. It is not going to be easy to improve prices when the seller gives it away at very low price.
 - The seller has to make sure that the cost is truly marginal cost and does not include overheads and COGS (Cost of Goods Sold) is not MC (Marginal Cost).

8. (b)

Applications of Learning Curve are as follows:

Learning curve helps to analyze CVP relationship during familiarization phase of product or process and thus is useful for cost estimates. It also assists in forecasting.

Learning curve provides the base to set standards for the learning phase.

It helps the Government to negotiate contracts. The Government receives full advantage of the decreasing unit cost in establishing the contract price.

Cost data adjusted for learning effect helps in proper pricing decisions.

8. (c.)

Kaizen Costing:

“Kaizen” is a Japanese term for making improvements to a process through small incremental amounts rather than through large innovation. Kaizen Costing focuses on the production process and Cost reductions are derived primarily through the efficiency of the production process. As the products are already in the manufacturing stage of their life Cycles, the Potential Cost Reductions are smaller – the aim of Kaizen costing being to reduce the Cost of Components and products by a pre-specified amount. Kaizen costing relies heavily on employee improvement.

8. (d)

Difficulties in implementation of Bench Marking:

The difficulties in implementation of Bench Marking are stated below:

- (i) **Time consuming:** Benchmarking is time consuming and at times difficult. It has significant requirement of staff time and Company resources. Companies may waste time in benchmarking non-critical functions.
- (ii) **Lack of management Support:** Benchmarking implementation requires the direct involvement of all managers. The drive to be best in the industry or world cannot be delegated.
- (iii) **Resistance from employees:** It is likely that there may be resistance from employees.
- (iv) **Paper Goals:** Companies can become pre-occupied with the measures. The goal becomes not to improve process, but to match the best practices at any cost.
- (v) **Copy-paste attitude:** The key element in benchmarking is the adaptation of a best practice to tailor it to a company's needs and culture. Without that step, a company merely adopts another company's process. This approach condemns benchmarking to fail leading to a failure of benchmarking goals.

8. (e)

Advantages of cost control system:

The advantages of cost control are mainly as follows:

- (a) Achieving the expected return on capital employed by maximising or optimizing profit.
 - (b) Increase in productivity of the available resources.
 - (c) Reasonable price of the customers.
 - (d) Continued employment and job opportunity for the workers.
 - (e) Economic use of limited resources of production.
 - (f) Increased credit worthiness.
 - (g) Prosperity and economic stability of the industry.
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