

Time Allowed : 3 Hours

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

Attempt Question No. 1 (carrying 25 marks) which is compulsory and any five (each carrying 15 marks) from the rest.

1. (a) Fill in the blanks: 1x8
- | | |
|---|-----|
| (i) Management _____ consists of shared values, beliefs and norms of organization. | (0) |
| (ii) _____ philosophy suggests that a firm should eliminate any reliance upon the EOQ. | (0) |
| (iii) The internet sometimes refers only to the most visible service—the internet _____ . | (0) |
| (iv) _____ is a listing of the type and number of parts needed to produce one unit of finished product. | (0) |
| (v) The concept of _____ emphasises linkage among all of the value-adding activities. | (0) |
| (vi) _____ provides risk assessment services and insurance advice and solution to the clients. | (0) |
| (vii) _____ are associated with the potential for not receiving payments owed by debtors. | (0) |
| (viii) _____ is a Japanese strategy for continuous improvement. | (0) |
- (b) Define the following terms in not more than two or three lines: 1½x6
- | | |
|-------------------------------|-----|
| (i) V in VAT Analysis; | (0) |
| (ii) McKinsey's 7s Framework; | (0) |
| (iii) Bench Marking; | (0) |
| (iv) Contribution approach; | (0) |
| (v) Talent Drain; | (0) |
| (vi) The Shewhart Cycle. | (0) |
- (c) Expand the following abbreviations: 1x8
- | | |
|--------------|-----|
| (i) CRP; | (0) |
| (ii) DBR; | (0) |
| (iii) DRP; | (0) |
| (iv) PLCM; | (0) |
| (v) SQC; | (0) |
| (vi) EFQM; | (0) |
| (vii) DMAIC; | (0) |
| (viii) JUSE. | (0) |
2. (a) The impact of control system on human behaviour can be explained by budgetary control—Explain. 5+5+5 (0)
- (b) What is Matrix Organisation structure? What are its advantages and disadvantages? (0)

- (c) What are the options for demand stimulation? How would you adjust capacity to match current demand? (0)
3. (a) What is Bench trending and how does it differ from Bench Marking? 5+5+5 (0)
- (b) Write a note on [ERP](#). (0)
- (c) What is aggregate planning and briefly explain its techniques. (0)
4. (a) A firm has 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 wages rate of Rs. 12 per hour. 10 (0)
- (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?
- (b) Discuss the principal four steps in Target [Costing](#). 5 (0)
5. (a) What is life cycle costing? What are the costs associated with different stages of life cycle of a product? 5 (0)
- (b) X Limited supports the concept of life cycle costing for new investment decisions covering its engineering activities. 10 (0)

The company is to replace a number of its machines and the Production Manager is to decide between the 'X' machine, a more expensive machine with a life of 12 years, and the 'W' machine with an estimated life of 6 years. If the 'W' machine is chosen it is likely that it would be replaced at the end of 6 years by another 'W' machine. The pattern of maintenance and running costs differs between two types of machine and relevant data are shown below:

	(Rs.)	
	X	W
Purchase price	19,000	13,000
Trade-in-value	3,000	3,000
Annual repair costs	2,000	2,600
Overhaul costs (p.a.) (at year 8)	4,000	(at year 4) 2,000
Estimated financing costs averaged over machine life (p.a.)	10%	10%

You are required to recommend, with supporting figures, which machine to purchase, stating any assumptions made.

PVIFA (10, 6) = 4.36, PVIFA (10, 12) = 6.81.

6. (a) "Purpose of sensitivity analysis is to identify the critical variable in the project analysis". —Discuss. 5 (0)
- (b) The Sales Manager of the Electronic Toy Company is considering two toys: a doll and game. The toys have discrete probability distributions of cash inflows in each of the next three years. 10 (0)

Event	Doll	Probability	Game
	Rs.		Rs.
Prosperity	20,000	0.2	42,000
Normal	15,000	0.5	20,000
Recession	9,000	0.3	(5,000)

(i) For each toy item, compute

- (1) The expected value of the cash inflow in each of the next three years.
The standard deviation.

(ii) Which toy would you select and why?

7. (a) Write a note on the Total Quality Management.

5 (0)

(b) Construct both $\bar{X}$ and R chart from the following data assuming each sub-group contains four samples:

10 (0)

Sub-group number	$\bar{X}$	R	Sub-group number	$\bar{X}$	R
1	6.36	0.10	11	6.32	0.18
2	6.38	0.18	12	6.30	0.10
3	6.35	0.17	13	6.34	0.11
4	6.39	0.20	14	6.39	0.14
5	6.32	0.15	15	6.37	0.17
6	6.34	0.16	16	6.36	0.15
7	6.40	0.13	17	6.35	0.18
8	6.33	0.18	18	6.35	0.13
9	6.37	0.16	19	6.34	0.18
10	6.33	0.13	20	6.34	0.16

The constant values are given below:

Sub-group size	A_2	D_3	D_4
2	1.88	0	3.27
3	1.02	0	2.57
4	0.73	0	2.28
10	0.31	0.22	1.78

8. Write short notes on (*any three*):

5x3

(a) Theory of Constraint;

(0)

(b) Value Chain Analysis;

(1)

(c) Balanced Score Card;

(0)

(d) "Zero Defects" and "Right First Time" — Philip Crosby.