



Maximum Marks: 80

Time: 3 Hours

Instructions:

1. Question No. 1 is Compulsory.
2. Answer any three from remaining five Questions.
3. Assume suitable data if required.
4. Draw figure, charts, block diagram wherever required.
5. All questions carry equal marks.

- Q 1 Explain the following topics in brief (attempt any four) 5x4=20
- A. Allowances considered in Standard Time Calculations
 - B. Stages of Product Life Cycle
 - C. Procedure of Method Study
 - D. Economic Order Quantity
 - E. Purchasing Cycle

- Q 2 a The demand for the product is given for the last 6 periods. Compute the Exponentially smoothed forecast for the 7th period taking factor 0.1 and 0.3. Which of these forecasts is better? 10

Period	1998	1999	2000	2001	2002	2003
Demand	127	189	234	143	302	116

- b. What is Lean Manufacturing? List and elaborate various wastes in manufacturing as per Just in Time Philosophy. 10

- Q 3 a. Following details are given: 10
- Setup Cost = Rs.300/setup
 - Production rate = 300 per day
 - Consumption rate = 100 per day
 - Inventory Carrying Cost = 20%
 - No of days per year = 300
 - Unit cost = Rs.12

Determine:

1. Economic Batch Size
2. Total Minimum Cost
3. Maximum Inventory.

- b. Write detail note on Logistic and Supply Chain Management. 10
- Q 4 a List and explain in brief various functions of Production Planning and Control. 10
- b. Compare Mass and Job Production systems on various features. 10

Q5 a. The elements of an assembly work are given below, 14

ELEMENTS	PREDECESSOR	DURATION(min)
A	-	4
B	-	3
C	-	2
D	A	5
E	A,B,C	4
F	C	6
G	F	4
H	D,E	3
I	E	2
J	G	5
K	G,I	4
L	H	6
M	J,K	4
N	L,M	3

If output required is 6 per hour. Design the work stations and balance the line. Find the Efficiency of the line.

b. Explain various types of Plant Layouts with neat block diagram. 6

Q6 Write short notes on the following.(attempt any four) 5x4=20

- Green Manufacturing.
- Maynard Operations Sequence Technique.
- Enterprise Resource Planning.
- Selective Inventory Control.
- Management Information System.