

2007

The company has received orders to deliver 400 chairs in week 5 and 300 chairs in week 6. Develop an MRP for all parts. 7

5. (a) What is aggregate production planning? Describe briefly its essential steps. 7
- (b) Contrast job enlargement and job enrichment. 4
- (c) Explain 'producer's risk' and 'consumer's risk' with the help of an OC curve. 4

11/15/11 2nd Sem

25(2) POM 202

2007

PRODUCTION AND OPERATION MANAGEMENT

Paper : 202

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks for the questions.

Answer Question No.1 and any *three* from the rest.

1. Write short notes on any *five* of the following : 5×5=25
- (a) Types of transformation processes
 - (b) Product layout vs Process layout
 - (c) EOQ model of inventory with its assumptions
 - (d) Inputs and outputs of MRP logic in a schematic diagram
 - (e) Stopwatch time study and work sampling
 - (f) Six sigma quality system.
2. (a) Discuss the extent of possible repercussions if location of a facility is not planned at all? 8

(b) A manufacturer requires 15000 units of a part annually for assembly. Manufacturer can produce this at the rate of 100 per day. Set-up cost for each production run is Rs. 24. To hold one unit of this part, inventory cost of manufacturer is Rs. 5 for a year. Assume 250 working days per year. Find out the EBQ and economic run length. 7

3. (a) The table below gives details about the various tasks in an assembly operation :

- (i) Find the theoretical minimum cycle time.
- (ii) Find the theoretical minimum number of workstations.
- (iii) Assign tasks to workstations using LOT rule.
- (iv) Calculate the efficiency of the assembly line.

Task	Precedence requirement	Task time (min)
A	-	10
B	C	20
C	A	30
D	A,C	15
E	A	10
F	B	20
G	D	10
H	G	15
I	G,H	15

7

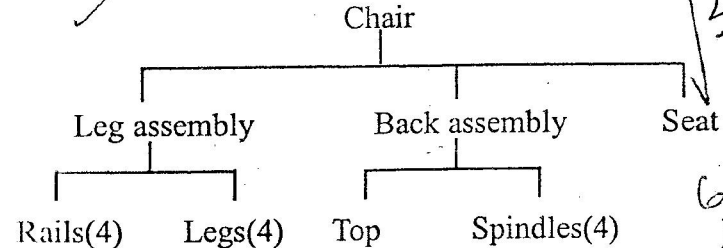
(b) Explain the technique of value analysis. What are its benefit? 4

(c) Describe in brief the various qualitative and quantitative methods for demand forecasting. 4

4. (a) Compare and contrast MRP with Order-point system. 3

(b) What is FMS? In what way it is better or worse compared to job shop and flow shop? 5

(c) The BOM for a chair is given below :



The inventory of parts and LT are as follows :

	Onhand inventory	LT
Chairs	100	1
Leg assembly	50	2
Back assembly	25	1
Seat	40	3
Rails	100	1
Top	30	2
Legs	150	1
Spindles	80	2