2018

MBA

MBA 3.4 (B)

MANUFACTURING PLANNING AND CONTROL

Full Marks :70 **Time : 3 Hours**

(The figures in the margine indicate full marks for the questions)

SECTION - A

Answer the following questions : 2x5=10

1. How is long term demand forecast useful?
2. What are the four characteristics of order point system?
3. What is a multilevel bill of material?
4. What are the inputs to CRP process?
5. What are the advantages and limitations of repetitive manufacturing?

SECTION B

Answer the following questions (any five) : 4x5=20

1. Calculate MSE from the following data

Period	:	1	2	3	4	5	6	7	8
Actual	:	217	213	216	210	213	219	216	212
Forecast	:	215	216	215	214	211	214	217	216

2. Explain various pure strategies and mixed strategies.
3. Complete the following table.Lead time for the part is two weeks.The lot size is 100

Week	1	2	3	4
Gross Requirement		50	45	20
Projected Available 75				
Net Requirement				
Planned Order Receipt				
Planned Order Release				

4. Describe Drum-Buffer_Rope scheduling system.
5. Describe the general procurement process from a logistics perspective.

P.T.O.

6. Discuss the differences between MRP,MRPII and ERP.
7. If the standard deviations is 200 units,what safety stock should be carried to provide a service level of 90%?If the expected demand during the lead time is1500 units,what is the order point?

SECTION - C

Answer the following questions (any five) : 8x5=40

1. Using exponential smoothing.calculate the forecasts for the months 2,3,4,5and 6.The smoothing constant is 0.2,and the old forecast for the month 1 is 245.

Month	Actual Demand	Forecast Demand
1	260	
2	230	
3	225	
4	245	
5	250	
6		

2. (a) Discuss the relevant cost components involved in aggregate planning decisions. 4
   (b) Discuss the aggregate planning alternatives available to an organization to modify demand and supply. 4
3. (a) Describe the seven uses of bill of material. 4
   (b) Complete the following MRP record. The lead time is four weeks and the lot size is 200.What will happen if the gross requirements in week 3 are increased to 150 units? As a planner what action can you take? 4

Week	1	2	3	4	5
Gross requirement	50	125	100	60	40
Scheduled Receipts		200		200	
Projected Available					
Net Requirements					
Planned Order Receipts					
Planned Order Release					

4. (a) Describe forward and backward scheduling.Why is back ward scheduling preffered. 4
   (b) Complete the following input/output report for weeks 1 and 2. 4

Week		1	2	3	4	Total
Planned Input		37	37	36	41	
Actual Input		33	33	31	43	
Cumulative Variance						
Planned Output		40	40	40	40	40
Actual Output		39	35	40	38	
Cumulative variance						
Planned Backlog	32					
Actual Backlog	33					

5. Describe and explain the concept of Just in time manufacturing.
6. (a) Discuss the significance of planning horizon. 4
   (b) How does master production scheduling differ in the different environment of make to stock,make to order and as semble-to- order? 4
7. A company wants to develop a level production plan for a family of products. The opening inventory is 600 units, and a decrease to 200 units is expected by the end of the plan. The demand for each of the months is given in what follows. How much should the company produce each month? What will be the ending inventory in each month? Do you see any problems with the plan?

Month		Jan	Feb	Mar	Apr	May	Jun	Total
Working days		20	22	20	20	18	19	
Forecast Demand		1200	1300	800	700	700	900	
Planned Production								
Planned Inventory	600							

******