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**MBA
18MBA304D**

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SALES AND OPERATION PLANNING
BRANCH : MBA
Max Marks : 100
Time : 3 Hours
Q.CODE : HR804

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1		Only Short Answer Type Questions (Answer All-10)	(2 x 10)
	a)	What is critical ratio?	
	b)	What is MRP –II.	
	c)	What are the costs associated in aggregate planning?	
	d)	What do you mean by system capacity?	
	e)	What do you mean by passive strategy?	
	f)	What do you mean by MPS ?	
	g)	What do you mean by theory of constraint?	
	h)	What is the purpose of Scheduling?	
	i)	What is capacity caution?	
	j)	Which strategy is beneficial to an organization as aggregate planning is concern.	

Part-II

Q2		Only Focused-Short Answer Type Questions (Answer Any Eight out of Twelve)	(6 x 8)
	a)	What is operations Planning?What are the factors affecting operation planning procedure?	
	b)	What are the different phases involved of operation planning and control?	
	c)	The processing time and due dates for 5 jobs A,B,C,D AND E are given in the table below:	

Job	Processing time(days)	Due date(days from Now)
A	12	20
B	10	24
C	8	29
D	14	19
E	9	44

Sequence these jobs according to EDD rule and calculate
(I) total Completion time (II) Average number of jobs in the system
(III) Total flow time (IV) Average job lateness
(V) Average flow time

d)	What are the major factors influencing demand forecast.? Explain.	
e)	List out various methods of forecasting. Explain any two methods in detail.	
f)	What are the factors affecting aggregate planning? Explain.	
g)	What are the inputs and outputs required for an effective MRP system.	
h)	Define production capacity planning..How to classify capacity planning?	
i)	What is MRP? Explain its objectives and benefits.	
j)	What is MPS? Explain its significance.	

k) The following information is available regarding a product :
   Regular time production capacity=2500 units per month
   Over time production cost=Rs 10 per unit
   Inventory carring cost =Rs.3 per unit per month
   Back log cost =Rs 5 Per unit per month
   Beginning inventory= 400 units
   Demand in units for four months is 4000,3500,2500, and 2800 respectively. Develop a level output capacity plan that yields zero inventory at the end of 4th month. What is the total cost that will result from this plan.

l) What is routing? Explain its significance and uses.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Explain the role of ERP in operation planning and control.   **(16)**

Q4   What do you mean by scheduling? Explain its purpose and types. and what are the stages involved in scheduling.   **(16)**

Q5   What are the techniques involved in Aggregate planning? Explain.   **(16)**

Q6   Find sales forecast for the 10th year. Using Least square method and exponential smoothing techniques(α=0.6)   **(16)**

Year; :	1	2	3	4	5	6	7	8	9
Sales(000):	16	22	26	34	36	42	48	55	60