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Total No. of Pages : 02

Total No. of Questions : 08

M.Tech. (ME) (2017 Onwards) (Sem.-1)

OPERATIONS MANAGEMENT

Subject Code : MTME-104

M.Code : 74718

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
 2. Each question carries TWENTY marks.
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1. a) Explain the Macro and Micro process design of a thermal power plant.

b) Distinguish between job type manufacturing and batch type manufacturing systems on the basis of various parameters.
 2. a) How is Box Jenkins method different from Delphi method of forecasting? Explain.

b) Explain the design and technological considerations in process design.
 3. a) Define aggregate production planning and explain the factors affecting it.

b) Explain and classify scheduling techniques with their applications.
 4. Explain the various mathematical methods of sales forecasting and compare them with graphical methods.
 5. a) Discuss the factors affecting the plant location.

b) What is ABC analysis method of stock control and explain the control policies for A, B & C categories of items.
 6. a) What is JIT-II? Explain its elements, advantages and limitations.

b) Derive the Inventory Model I (basic model) with neat sketch by considering the appropriate stock replenishment. Write all the assumptions also.

- 7 a) Given below is the sales pattern of ABC Company; manufacturing consumer goods. Trend of consumption of consumer goods in the market is also depicted. Find out the correlation between the sales of the company and the consumption of goods in the market. Also compute the estimates of sales when the consumption in the market will rise to 20 crores.

Sales (Rs. crores)	1	2	3	4	5	6	7	8	9
Consumption of goods in the market (Rs. crores)	9	8	10	12	11	13	14	16	15

b) ABC manufacturing company needs 28,800 ball bearings per year. The cost of placing an order is Rs.48/- and inventory carrying cost, as a percentage of average inventory investment is 12%. Determine :

- a. Value of each assignment
- b. Number of orders per year.

8. Write the short notes on the followings :

- a) ERP
- b) Capacity Planning
- c) Multi-stage manufacturing systems

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.