[Total No. of Questions - 10] [Total No. of Printed Pages - 3]
(2063)

951

M.B.A. 2nd Semester Examination

Management Science-II

202

Time : 3 Hours **Max. Marks : 60**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/ continuation sheet will be issued.

Note : Attempt any five questions selecting one from each unit. Marks are given in brackets.

UNIT - I

1. Comment on the following statements:

   (a) OR is the art of winning wars without actually fighting them.

   (b) OR advocates system approach and is concerned with optimization. It provides a quantitative analysis for decision making. **(6+6)**

2. "Model building is the essence of the operation research approach". Discuss. **(12)**

UNIT - III

3. A dairy firm has two milk plants with daily milk production of 6 million litres and 9 million litres respectively. Each day the firm must fulfill the needs of its three distribution centres which have milk requirement of 7, 5 and 3 million one

million litres of milk from each plant to each distribution centre is given in hundreds of rupees below. Formulate the L.P. Model to minimize the transportation cost.

		Distribution Centres			Supply
		1	2	3	
Plant	1	2	3	11	6
	2	1	9	6	9
Demand		7	5	3	

(12)

4. What is the significance of duality theory of linear programming? Describe the general rules for writing the dual of a linear programming problem. **(12)**

UNIT - III

5. Enumerate the various types of inventory models. **(12)**

6. Consider an item for which the following data are available:

   Annual average demand = 10,000 units; Standard deviation of demand per milk = 50 units; Unit cost = Rs. 6; Ordering Cost = Rs. 10 per milk; Inventory carrying cost = 30 percent; Average lead time = 4 weeks; Maximum delay = 3 weeks; Probability of delay = 0.20; Service level = 95 percent. Design an appropriate inventory system of this item. **(12)**

UNIT - IV

7. What is a game in game theory? What are the properties of a game? Explain the maximum and minimax criterion of best strategy. **(12)**

8. Reduce the following game by dominance property and solve it. **(12)**

		Player B				
		1	2	3	4	5
Player A	I	1	3	2	7	4
	II	3	4	1	5	6
	III	6	5	7	6	5
	IV	2	0	6	3	1

UNIT - V

9. Explain the problem relating to replacement of items which deteriorate with time under (i) money value is disregarded & (ii) under money value is regarded. **(12)**

10. What is simulation? Discuss the various steps involved in the simulation process. **(12)**