Code No: 762AD

R19

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MBA II Semester Examinations, October/November-2020
QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS

Time: 2 hours   Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1. Explain the applications of OR in different Managerial Areas. [15]

2. Solve the following LPP by Graphical Method:
   Maximize $Z = 50X_1 + 60X_2$
   Subject to: $2X_1 + X_2 \leq 300$;
   $4X_1 + 8X_2 \leq 900$;   And $X_1, X_2 \geq 0$ [15]

3. What is an Assignment Problem? Discuss its Objectives? [15]

4. What is Decision Tree? Discuss the Advantages and Disadvantages of Decision Tree Approach? [15]

5. Explain the structure and components of a Queuing Model. [15]

6. Solve the following Assignment Problem:- [15]

Hospitals → Doctors ↓	A	B	C	D
P	7	13	4	12
Q	5	3	8	2
R	9	12	11	8
S	10	6	8	7

7. Explain the Opportunities and Short-comings of using an OR Model. [15]

8. The Mean Arrival Rate at a Service Centre at a Bank is 4 per hour. The Mean Service Rate is 8 minutes. Assuming Poisson Arrival Rate and Exponential Servicing Time, determine the following:-
   a) Utilization Factor;
   b) Probability that 2 persons are in the System;
   c) Expected no. of persons in the Queue. [15]

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