B.Sc. DEGREE EXAMINATION,ODD SEMESTER 2020
III Year V Semester
Resource Management Techniques

Answer any **FIVE** questions $(5 \times 5 = 25)$ Marks

1. Solve the following LPP by graphically.

   $Maxz = 8x_1 + 5x_2$
   $subjectto$
   $2x_1 + x_2 \leq 500$
   $x_1 \leq 150$
   $x_2 \leq 250$
   $x_1, x_2 \geq 0$

2. Write an algorithm for Solving a Linear Programming problem using Simplex method.

3. Determine the initial basic feasible solution to the following transportation problem using row minima method.

   To Availability

From	5	2	4	3	12
	4	8	1	6	15
	4	6	7	5	8
Demand	7	12	17	9	

4. A Salesman has to visit five cities A,B,C,D and E. The distance (in hundred miles) between the five cities is as follows

$$\begin{array}{cc} & \begin{array}{ccccc} A & B & C & D & E \end{array} \\ \begin{array}{c} \\ A \\ B \\ \text{From } C \\ D \\ E \end{array} & \begin{pmatrix} \infty & 7 & 6 & 8 & 4 \\ 7 & \infty & 8 & 5 & 6 \\ 6 & 8 & \infty & 9 & 7 \\ 8 & 5 & 9 & \infty & 8 \\ 4 & 6 & 7 & 8 & \infty \end{pmatrix} \end{array}$$

   Fine the order in which the Salesman has to visit the cities so that the covers all the cities by travelling minimum distance.

5. Find the sequence that minimizes the total elapsed time required to complete the following tasks on two machines

Job	A	B	C	D	E	F
Machine I	1	4	6	3	5	2
Machines II	3	6	8	8	1	5

6. Two players A and B match coins. If the coins match then A wins two units of value if the coin do not match then B wins 2 units of value. Determine the optimum strategies for the players and the value of the game.
7. Given the following data draw the network

Activity	A	B	C	D	E	F	G	H	I	J	K
Predecessor	-	A	A	A	B	C	C	C,D	E,F	G,H	I,J