**Assignment for OR**

1. What are Operation Research techniques?
2. What do You Understand by LPP
3. What is Degeneracy?
4. Draw the graph Following inequations:

* X1+2X2<=32
* X1+X2<=24

5.What are the Step of VAM

6. Solve following LPP Graphically

Min Z = 20x1+40x2

Sub To Const: 36x1+6x2>=108

3x1+12x2>=36

20x1+10x2>=100

And x1,x2>=0

7. A dairy plant has five milk tankers I, II, III, IV & V. These milk tankers are to be used on five delivery routes A, B, C, D, and E. The distances (in kms) between dairy plant and the delivery routes are given in the following distance matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | I | II | III | IV | V |
| A | 160 | 130 | 175 | 190 | 200 |
| B | 135 | 120 | 130 | 160 | 175 |
| C | 140 | 110 | 155 | 170 | 185 |
| D | 50 | 50 | 80 | 80 | 110 |
| E | 55 | 35 | 70 | 80 | 105 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sources | Destinations | | | Supply |
| A | 2 | 7 | 4 | 50 |
| B | 3 | 3 | 7 | 70 |
| C | 5 | 4 | 1 | 80 |
| D | 1 | 6 | 2 | 140 |
| Demand | 70 | 90 | 100 | Total=? |

Q8. Find Basic Feasible Solution of Transportation Problem using:

1. North West Corner rule
2. Least Cost Rule
3. Vogal’s Approximation rule