**Assignment for OT**

1. Explain necessity of Operation Research (OT) in Industry?
2. What do You Understand by LPP and application areas of LPP?
3. Draw the graph Following inequations:

* X1+4X2<=36
* X1+X2<=24

4.What are the Step of MODI Method

5. Solve following LPP Graphically

Max Z = 5x1+7x2

Sub To Const: x1+x2<=4

3x1+8x2<=24

10x1+7x2<=35

And x1,x2<=0

6. 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 | 6 | 4 | 1 | 5 | 14 |
| B | 8 | 9 | 2 | 7 | 16 |
| C | 4 | 3 | 6 | 2 | 5 |
| Demand | 6 | 10 | 15 | 4 | Total=? |

Q7. Find Basic Feasible Solution of Transportation Problem using:

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