# LESSON PLAN (SESSION 2024-25)

**CLASS:- B.C.A SEM:- IV FACULTY NAME :- ANIL KUMAR MAURYA**

## SUBJECT :- Operation Research

| S.No. | Date. | Day | Paper No. | Unit Name. | Topic. |
|---|---|---|---|---|---|
| 1 | 16-Jan-25 | Thursday | 2 | Introduction | Historical development, Meaning of OR |
| 2 | 17-Jan-25 | Friday | 2 | Introduction | Historical development, Meaning of OR |
| 3 | 18-Jan-25 | Saturday | 2 | Introduction | Modeling in OR, Principles of Modeling, |
| 4 | 20-Jan-25 | Monday | 2 | Introduction | Modeling in OR, Principles of Modeling, |
| 5 | 21-Jan-25 | Tuesday | 2 | Introduction | Application and role of OR in decision making. |
| 6 | 22-Jan-25 | Wednesday | **CLASS TEACHING** | | |
| 7 | 23-Jan-25 | Thursday | 2 | Introduction | Application and role of OR in decision making. |
| 8 | 24-Jan-25 | Friday | 2 | Linear Programming Problem | Main components of LPP, Formulation of LPP |
| 9 | 25-Jan-25 | Saturday | 2 | Linear Programming Problem | Main components of LPP, Formulation of LPP |
| 10 | 27-Jan-25 | Monday | 2 | Linear Programming Problem | convex set, graphical solution of LPP |
| 11 | 28-Jan-25 | Tuesday | 2 | Linear Programming Problem | convex set, graphical solution of LPP |
| 12 | 29-Jan-25 | Wednesday | **MONTHY EVALUATION** | | |
| 13 | 30-Jan-25 | Thursday | 2 | Linear Programming Problem | convex set, graphical solution of LPP |
| 14 | 31-Jan-25 | Friday | 2 | Linear Programming Problem | slack and surplus variables, matrix form of LPP |
| 15 | 1-Feb-25 | Saturday | 2 | Linear Programming Problem | slack and surplus variables, matrix form of LPP |
| 16 | 4-Feb-25 | Tuesday | 2 | Linear Programming Problem | slack and surplus variables, matrix form of LPP |
| 17 | 5-Feb-25 | Wednesday | 2 | Linear Programming Problem | slack and surplus variables, matrix form of LPP |
| 18 | 6-Feb-25 | Thursday | **CLASS TEACHING** | | |
| 19 | 7-Feb-25 | Friday | 2 | Linear Programming Problem | Simplex method for solving LPP |
| 20 | 8-Feb-25 | Saturday | 2 | Linear Programming Problem | Simplex method for solving LPP |
| 21 | 10-Feb-25 | Monday | 2 | Linear Programming Problem | Simplex method for solving LPP |
| 22 | 11-Feb-25 | Tuesday | 2 | Assignment Problem | Introduction, Mathematical formulation of Assignment problem |

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| 23 | 13-Feb-25 | Thursday | 2 | Assignment Problem | Introduction, Mathematical formulation of Assignment problem |
| 24 | 14-Feb-25 | Friday | **CLASS TEACHING** | | |
| 25 | 15-Feb-25 | Saturday | 2 | Assignment Problem | Introduction, Mathematical formulation of Assignment problem |
| 26 | 17-Feb-25 | Monday | 2 | Assignment Problem | fundamental theorems, application of assignment problem |
| 27 | 18-Feb-25 | Tuesday | 2 | Assignment Problem | fundamental theorems, application of assignment problem |
| 28 | 19-Feb-25 | Wednesday | 2 | Assignment Problem | fundamental theorems, application of assignment problem |
| 29 | 20-Feb-25 | Thursday | 2 | Assignment Problem | Balanced and unbalanced assignment problem |
| 30 | 21-Feb-25 | Friday | **MONTHY EVALUATION** | | |
| 31 | 22-Feb-25 | Saturday | 2 | Assignment Problem | Balanced and unbalanced assignment problem |
| 32 | 24-Feb-25 | Monday | 2 | Assignment Problem | Balanced and unbalanced assignment problem |
| 33 | 25-Feb-25 | Tuesday | 2 | Assignment Problem | Hungarian for solving assignment problem. |
| 34 | 27-Feb-25 | Thursday | 2 | Assignment Problem | Hungarian for solving assignment problem. |
| 35 | 28-Feb-25 | Friday | 2 | Assignment Problem | Hungarian for solving assignment problem. |
| 36 | 1-Mar-25 | Saturday | **CLASS TEACHING** | | |
| 37 | 3-Mar-25 | Monday | 2 | Transportation Problem | Introduction, Transportation Matrix |
| 38 | 4-Mar-25 | Tuesday | 2 | Transportation Problem | Introduction, Transportation Matrix |
| 39 | 5-Mar-25 | Wednesday | 2 | Transportation Problem | mathematical model of TP, Balanced and Unbalanced TP |
| 40 | 6-Mar-25 | Thursday | 2 | Transportation Problem | mathematical model of TP, Balanced and Unbalanced TP |
| 41 | 7-Mar-25 | Friday | 2 | Transportation Problem | mathematical model of TP, Balanced and Unbalanced TP |
| 42 | 8-Mar-25 | Saturday | **CLASS TEACHING** | | |
| 43 | 10-Mar-25 | Monday | 2 | Transportation Problem | mathematical model of TP, Balanced and Unbalanced TP |
| 44 | 11-Mar-25 | Tuesday | 2 | Transportation Problem | mathematical model of TP, Balanced and Unbalanced TP |
| 45 | 17-Mar-25 | Monday | 2 | Transportation Problem | Matrix minima method, Column minima method, |
| 46 | 18-Mar-25 | Tuesday | 2 | Transportation Problem | Matrix minima method, Column minima method, |
| 47 | 19-Mar-25 | Wednesday | 2 | Transportation Problem | Matrix minima method, Column minima method, |
| 48 | 20-Mar-25 | Thursday | **CLASS TEACHING** | | |

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|---|---|---|---|---|---|
| 49 | 21-Mar-25 | Friday | 2 | Transportation Problem | Vogel's approximation method for solving TP |
| 50 | 22-Mar-25 | Saturday | 2 | Transportation Problem | Vogel's approximation method for solving TP |
| | 24-Mar-25 | Monday | **MID - TERM EXAM SCHEDULE** | | |
| | 25-Mar-25 | Tuesday | | | |
| | 26-Mar-25 | Wednesday | | | |
| | 27-Mar-25 | Thursday | | | |
| | 28-Mar-25 | Friday | | | |
| | 29-Mar-25 | Saturday | | | |
| 51 | 1-Apr-25 | Tuesday | 2 | Transportation Problem | Vogel's approximation method for solving TP |
| 52 | 2-Apr-25 | Wednesday | 2 | Network Analysis and Game Theory | Introduction of NA, definitions for Network |
| 53 | 3-Apr-25 | Thursday | 2 | Network Analysis and Game Theory | Introduction of NA, definitions for Network |
| 54 | 4-Apr-25 | Friday | 2 | Network Analysis and Game Theory | Fulkerson's rules, construction of Network |
| 55 | 5-Apr-25 | Saturday | 2 | Network Analysis and Game Theory | Fulkerson's rules, construction of Network |
| 56 | 7-Apr-25 | Monday | **CLASS TEACHING** | | |
| 57 | 8-Apr-25 | Tuesday | 2 | Network Analysis and Game Theory | PERT and CPM method |
| 58 | 9-Apr-25 | Wednesday | 2 | Network Analysis and Game Theory | PERT and CPM method |
| 59 | 11-Apr-25 | Friday | 2 | Network Analysis and Game Theory | Introduction to Game Theory, competitive game |
| 60 | 12-Apr-25 | Saturday | 2 | Network Analysis and Game Theory | Introduction to Game Theory, competitive game |
| 61 | 15-Apr-25 | Tuesday | 2 | Network Analysis and Game Theory | finite and infinite game ,Zero sum game |
| 62 | 16-Apr-25 | Wednesday | **CLASS TEACHING** | | |
| 63 | 17-Apr-25 | Thursday | 2 | Network Analysis and Game Theory | finite and infinite game ,Zero sum game |
| 64 | 19-Apr-25 | Saturday | 2 | Network Analysis and Game Theory | finite and infinite game ,Zero sum game |
| 65 | 21-Apr-25 | Monday | 2 | Network Analysis and Game Theory | finite and infinite game ,Zero sum game |
| 66 | 22-Apr-25 | Tuesday | 2 | Network Analysis and Game Theory | fundamental theorems of game |
| 67 | 23-Apr-25 | Wednesday | 2 | Network Analysis and Game Theory | fundamental theorems of game |
| 68 | 24-Apr-25 | Thursday | **MONTHY EVALUATION** | | |

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| 69 | 25-Apr-25 | Friday | 2 | RIVISION | RIVISION |
| 70 | 26-Apr-25 | Saturday | 2 | RIVISION | RIVISION |
| 71 | 28-Apr-25 | Monday | 2 | RIVISION | RIVISION |
| 72 | 29-Apr-25 | Tuesday | 2 | RIVISION | RIVISION |
| 73 | 30-Apr-25 | Wednesday | 2 | RIVISION | RIVISION |