OBE Based Teaching Lesson Plan 2019-20

Program: M.Com IB
Course Name: OPERATIONS RESEARCH FOR BUSINESS DECISIONS
Course Code: P415 AR 201
Semester: II
Lecture hours: 45 hours
Faculty in-charge: Mr.Dileep Kumar Shetty

Course Outcome No.	Course Outcomes	T level Indicator
CO1	Illustrate the nature and scope of OR models and its applications for Business problems for decision making.	**T2**
CO2	Design optimum solution for business decisions by using linear programming models.	**T6**
CO3	Design optimum solution for business decisions by using Transport problems and Assignment problems models	**T6**
CO4	Solution for Business decision problems by using Queuing models and simulations.	**T3**
CO5	Design optimum solution for business decisions by using Gaming theory	**T6**
CO6	Develop a project network diagram and analysis by Pert or CPM method for project management.	**T6**

Module No. & Topics Covered	Course Outcome No.	No. of Lecture Hours	Pre-Class Activity	Instructional techniques	Assessment	T level
Module 1: **Introduction to Operation Research** – Definition and evaluation of OR – Characteristics and Scope of OR – Management Applications of OR.	**CO1**	**3**	**Youtube video (NPTEL)**	• Online Videos • Lecture with the help of power Point presentation • Discussion	Evaluation through MCQs	**T2**
Module 2: Linear Programming – Formulation of LP Problems – Graphical Solutions and Simplex Algorithms – Computer package for solving LP – Applications of LP Problems – Need for integer and Non Linear Programming.	**CO2**	**10**	**YouTube video**	• Lecture • Case Study • Discussion • Problem solving	Evaluation through tests and MS excel	**T6**

Module-3: Transportation and Assignment : Formulation and solution of transportation problem, Formulation and solution of Assignment, Application of these Techniques in Management.	**CO3**	**10**		• Lecture • Discussion • Problem solving	Evaluation through tests	**T6**
Module-4: Queuing theory and Simulations: Queuing Models and Elements, Single and Multiple Server Queries, Simulation and its applications, Commercial Simulations Packages.	**CO4**	**7**		• Lecture • Case Study • Discussion • Problem solving	Evaluation through tests .	**T3**
Module-5: Game theory: – Application of Game theory.	**CO5**	**6**		• Lecture • Discussion • Case study • Problem solving	Evaluation through tests	**T6**
Module-6: Network Analysis:	**CO6**	**9**		• Lecture • Discussion • Problem	Evaluation through MCQs, group	**T6**

Definition of Projects, Drawing of Diagram – LS/LF – ES/EF Concepts – Crashing of Activities – Cost Implications. PERT – CPM – Markovian Decision Process and Application in Business.				solving • Case Study	activity and tests	

Continuous Internal Assessment

- Class test 1 (before midsem exam):First week of January
- Assignment
- Class test 2 (before end sem exam):Last week of February.

Books for Reference:

- *Anderson Sweeney Williams: An Introduction to Management Science Quantitative Approaches to Decision, Thomson.*
- *Chacko, George K: Applied Operations Research/Systems Analysis in Hierarchical Decision Making, North Holland Publishing Co.*
- *Taha, Hamdy A: Operations Research, Prentice Hall, India.*
- *Hiller/Lieberman: Introduction to Operations Research, Tata McGraw Hill.*
- *Sharma S D: Operations Research, Kedarnath Ramnath & Co.*

Approved by: