

Syllabus Plan(2020-21)
BBA (III Sem)
Operational Research

Sr. no	Topic	Teaching points	Specific objectives	Methods, approaches and techniques	Resources and link
Unit I	Operational Research, Linear Programming, Transportation Problem, Assignment Problem.	Operational Research— Meaning, Significance and Scope. Introduction to Linear Programming, Formulation of Linear Programming—Problem, Graphical Method, Simplex Method. Duality in Linear Programming, Definition of Dual Problem, General Rules in Converting any Primal into its Dual, Transportation Problem, Assignment Problem.	To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.	Research study, Action research, Examples, Recent developments in industry, Discussion, Lecture method, PPT's	Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND. Kalyani Publishers. www.slideshare.net
Unit II	Queuing Theory, Game Theory and Sequencing Problem	Queuing Theory: MMI and MMS models Games Theory : Two Persons Zero Sum Games, Pure Strategies, Mixed Strategies. Sequencing Problem: Two machines	To understand the concepts and techniques of Operations Research for business decision making and to acquire required skills to solve various problems in OR.	Research study, Action research, Examples, Recent developments in industry, Discussion, Lecture method, PPT's	Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND. Kalyani Publishers. www.slideshare.net

Question Bank:

1. What are the steps involved in OR problems?
 2. What are the important techniques used in OR. Discuss limitations also.
 3. What do understand by optimum utilization of resources.
 4. Explain feasible solution, basic feasible solution, optimal solution, infeasible solution, objective function.
 5. Formulate the LPP problem and its computational procedure.
 6. What is degeneracy? How it can be resolved in transportation problem?
 7. What is unbalanced assignment model? How it is solved by HAM?
 8. Discuss MMI and MMS models of queuing theory.
 9. hat is Game theory? What are its properties? Explain the assumptions.
- Solve all numerical problems for better understanding.