**SYLLABUS PLAN (2017-18)**

**B.COM 6th SEM**

**SUBJECT-OPERATIONS RESEARCH**

**TOTAL MARKS: 100**

**EXTERNAL: 80**

**INTERNAL: 20**

**UNIT-I**

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| TOPIC | TEACHING POINTS | OBJECTIVE | METHODS AND TECHNIQUES | RESOURCES AND LINKS |
| OPERATION  RESEARCH  LPP  Transportation Problems  Assignment Problems | 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. | 1)Class teaching with examples  2)Group discussions  3)Power point presentations | 1.Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.  2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.  3. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.  4. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.  5. Kalavathy, Operations Research, Vikas Publishing House, ND. |

**UNIT-II**

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| TOPIC | TEACHING POINTS | OBJECTIVE | METHODS AND TECHNIQUES | RESOURCES AND LINKS |
| Decision Theory  Games Theory  . Simulation | Decision Making under Uncertainty and Risk, Decision Trees. Replacement  Problem (Individual and Group replacement Problems both). Games Theory : Two Persons Zero  Sum Games, Pure Strategies, Mixed Strategies.  Simulation; Meaning, Process, Advantages,  Limitations and Applications. | To understand the concepts and techniques of Operations Research for business  decision making and to acquire required skills to solve various problems in OR. | 1)Class teaching with examples  2)Group discussions  3)Power Point Presentations | 1.Paneerselvam, Operations Research, Prentice Hall of India, New Delhi.  2. Taha, Operations Research: An Introduction, Prentice Hall of India, New Delhi.  3. Kapoor, V.K., Operations Research, Sultan Chand & Sons, New Delhi.  4. Sharma, J. K., Operations Research, Theory and Applications, Macmillan India Ltd., ND.  5. Kalavathy, Operations Research, Vikas Publishing House, ND. |

**NOTE- UNIT-I WILL BE COVERED BEFORE HOUSE EXAMINATION AND UNIT-II WILL BE COVERED AFTER HOUSE EXAMINATION .i.e 75% and 25% RESEPECTIVELY.**

QUESTION BANK

UNIT – 1

1. What do you mean by Operation research . Explain its significance & scope .
2. Explain various techniques of OR.
3. What do you mean by LPP. Explain the Graphical Method with example of unbounded solution problem .
4. Explain the Hungarian Method to solve simplex problems in detail .
5. What is Transportation Problem . Explain in Detail the various methods used in it along with the optimality tests .
6. What is Assignment Problem . Explain its Tools & Techniques .

UNIT –II

1. Explain the Decision Theory . Explain in detail Decision Tree Analysis .
2. Discuss in detail the sub- game method under Game Theory with example .
3. What is Simulation problem . Discuss its Process .
4. What is the difference between individual & group replacement .

**ASSTT. PROF BALJINDER KAUR**

**ASSTT. PROF. MANISHA THAKUR**

**(DEPTT. OF COMMERCE)**