New Syllabus of Gujarat University for M.Com. Semester 4

COM 507 – OPERATIONAL RESEARCH

**Unit:1 Introduction to Operations Research:** (25%)

**Unit:2 Linear Programming and its Applications:** (25%)

**Unit:3 Theory of Games and Sequencing Problems:** (25%)
Study of Two Person Zero-sum Game Problems, Games with and without Saddle point, Principles of Dominance, Graphical method, Conversion of Game problem into an L.P. problem, Problem of Sequencing: Sequencing of n jobs on two and three machines, Applications of Game theory and Sequencing problems.

**Unit:4 Network Analysis: (CPM & PERT):** (25%)
Concept of Network, Network Diagram, Concepts connected with a Network, Labeling Method, Critical Path Method, Determination of Floats: Total Float, Free Float and Independent Float and examples related to them. Project Evaluation and Review Technique (PERT), Applications of CPM and PERT, Determination of project time and project variance and examples related to them using the principle of Normal distribution.

**References:**
3. Hiller and Lieberman: Operations Research
5. Rao S.S : Optimization Theory and Applications