

**APPLIED PAPER – I – OPERATIONS RESEARCH**

**Unit I**

Introduction to operations research – elementary treatment of linear programming – simplex method for constraints,

**Unit II**

Application to transportation problem – transportation algorithm – degeneracy in transportation problem – unbalanced transportation problem – assignment problem – assignment algorithm – unbalanced assignment problem

**Unit III**

PERT and CPM – CPM net works – critical and sub critical jobs – determining the critical path – Net work calculations PERT networks – probability aspect of PERT – PERT tune, PERT cost

**Unit IV**

Inventory management – deterministic models – without shortage and with shortage

**Unit V**

Queing theory – Poisson models – M/M/1 – steady state behaviour – transient behaviour of M/M/1

Books for Reference:

1. Operations Research - Kanthiswarup, P.K. Gupta & Manmohan (for Units – I, II & III)
2. Operations Research - R.K. Gupta (for Units – IV & V)
3. Operations Research - An introduction by Taha H.A. (MC Graw Hill)