

(AG505) Systems Engineering

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Unit 1

System concepts. Requirements for a Linear programming problems. Mathematical Formulation of Linear Programming problems and its Graphical solution.

Unit II

Response of Systems. Computer as a tool in system analysis. Simplex method. Degeneracy and Duality in Linear programming. Artificial variable techniques, Big M method and two-phase methods.

Unit III

Mathematical models of physical systems. Modelling of Agricultural Systems and operations. Cost analysis.

Unit IV

Transportation problems. Assignment problems. Waiting line problems;

Unit V

Project management by PERT/CPM. Resource scheduling.

TEXT BOOKS:

1. Dharani. S and Venkata Krishnan. (1990). *Operations Research Principles & Problems*. Keerthi Publishing homes Pvt. Ltd.
2. Gupta, P.K. and Man Mohan. (1994). *Problems in Operations Research*. Sultan chand & sons, New Delhi.

REFERENCE BOOKS:

1. Kapoor, V.K. (1994). *Operations Research*. Sultan chand & sons, New Delhi.