

OPEN ELECTIVE

OE	Basic Mathematics
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Unit I

Mathematical Logic: Connection – Normal Forms – Theory of Inferences – Predicate Calculus.

Unit II

Set Theory: Operations on Sets – Basic Set Identities – Relations and Orderings, Functions.

Unit III

Introduction: formulation of LP problems, Graphical solution of LP problems. Introduction to Simplex, revised simplex methods and Dual simplex, Game theory.

Unit IV

Graph Theory: Basic Concepts of Graph Theory- Paths – Connectedness – Matrix Representation of Graphs – Trees – List structures and Graphs

Books for Reference:

1. C. L. Liu – Elements of Discrete Mathematics, McGraw-Hill, 1986.
2. Kenneth H. Rosen – Discrete Mathematics and its Applications, McGraw-Hill, 2002.
3. F. Harary – Graph Theory, Addition Wesley Reading Mass, 1969.
4. N. Deo – Graph Theory With Applications to Engineering and Computer Science, Prentice Hall of India, 1987.
5. K. R. Parthasarathy – Basic Graph Theory, Tata McGraw-Hill, New Delhi, 1994.
6. G. Chartand and L. Lesniak – Graphs and Diagraphs, wadsworth and Brooks, 2nd Ed.,
7. Clark and D. A. Holton – A First Look at Graph Theory, Allied publishers.
8. D. B. West – Introduction to Graph Theory, Pearson Education Inc., 2001, 2nd Ed.,
9. J. A. Bondy and U. S. R. Murthy – Graph Theory with applications, Elsevier, 1976.
10. S. D Sharma- Operations Research.