

Syllabus for B.A /B.Sc. Mathematics as Major Subject &

B.A /B.Sc. (Honors) Mathematics

SEMESTER – I

MJ-1: Algebra and Trigonometry

Unit-I: Set Theory: Cartesian product of sets, Relation, Kinds of Relation, partition of a set, Relation of congruence modulo n , Partial and total order relation, Fundamental theorem of equivalence relation, Mapping and set mapping.

Unit-II: Abstract Algebra: Notion of Group, subgroup, properties of groups, cyclic group, order of an element Definitions and examples of Ring, Field and Integral domain, elementary properties of rings.

Unit-III: Trigonometry: Application of De-Moivre's Theorem, Complex Argument, Gregory's Series, Hyperbolic functions and summation of Series.

Books Recommended

Set Theory: — K. K. Jha

Set Theory: — A. R. Vasishtha

Abstract Algebra: — K. K. Jha

Abstract Algebra: — A. R. Vasishtha

Trigonometry: — Das and Mukherjee

Trigonometry: — Lalji Prasad

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