

W.e.f. 2003-2004 AB 3-6  
SX-S112 SYLLABUS

ANDHRA UNIVERSITY  
DEPARTMENT OF MATHEMATICS  
M.Sc MATHEMATICS  
I SEMISTER

M-103 TOPOLOGY - I

UNIT I

Finite sets- Countable and uncountable sets-infinite sets and the axiom of choice -well ordered sets- the maximum principle

Sections 6,7,9,10 and 11 of Chapter 1

UNIT II

Topological spaces- Basis for a Topology- The order topology-The product topology on  $X \times Y$ -the subspace topology- closed sets and limit points

Sections 12 to 17 of Chapter 2

UNIT III

Continuous functions - the product topology-Metric spaces- the metric topology

Sections 18 to 21 of Chapter 2

UNIT IV

Connected spaces-connected subspaces of the real line-Compact spaces- compact subspaces of the real line-limit point compactness - Local compactness

Sections 23,24,26 to 29 of Chapter 3

Extent and content as in the book: Topology by James R.Munkers, Second edition, Pearson education Asia-Low price edition