# MA 536: Topology (3-0-0:3)

Definition and examples of topological spaces, basis and subbasis, order topology, subspace topology,closure, limit point, boundary, interior.

Continuity and related concepts, product topology,metrictopology,quotient topology, a brief introduction to minimal uncountable well-ordered set $S_\Omega$,countability axioms,Lindelof spaces and separable spaces.

Connected spaces and connected sets, component, path connectedness,pathcomponent,local connectedness, local path connectedness.

Compact spaces and compact sets, limit point compact and sequentially compact spaces, locally compact spaces, one point compactification, finite product of compact spaces, statement of Tychonoff's theorem.

Separation axioms,Urysohn's lemma,Tietze's extension theorem, statement of Urysohn'smetrization theorem.

**Text Books and References:**


1. J. R. Munkres, "Topology", Prentice-Hall of India Ltd.
2. G. F. Simmons, "Introduction to Topology and Modern Analysis", McGraw-Hill Education (India) Pvt. Ltd.
3. C. W. Patty, "Foundations of Topology", Jones & Bartlett Publishers
4. K. D. Joshi, "An Introduction to General Topology", New Age International