

MA-627 TOPOLOGICAL ALGEBRAS (Pre-requisite M-611 & 614)

Definition of a Topological algebra and its Examples. Adjunction of Unity, Locally Convex Algebras, Idempotent and m -convex sets, Locally Multiplicatively convex (l.m.c) algebras, Q-algebras, Frechet algebras, Spectrum of an element, Spectral radius, Basic theorems on Spectrum, Gelfand-Mazur Theorem. Maximal ideals, Quotient algebras, Multiplicative linear functionals and their continuity, Gelfand transformations, Radical of an algebra, Semi-simple algebras, Involution algebras, Gelfand-Naimark theorem l.m.c. algebras.

RECOMMENDED BOOKS:

1. E. Beckenstein, L. Narici and C. Suffel, Topological Algebras, North-Holland Company, 1977.
2. A. Mallios, Topological Algebras, Selected Topics, North-Holland Company, 1986.
3. T. Husain, Multiplicative Functions on Topological Algebras, Pitman Advanced Publishing Program, 1983.
4. E. Michael, Locally Multiplicatively-convex Topological Algebras, Memoirs Amer. Math. Soc. No.11, 1951.
5. W. Zelazko, Metric Generalization of Banach Algebras, Rozprawy Matematyczne, 1965.