FMCC802 STOCASTIC PROCESS(3-1-0)

Module-I(14 hours)

Introduction of Stochastic process, specification of stochastic process, Stationary process, martingales. Markov chain, Transition probability, Classification of states and chains, Determination of higher transition probability, Stability of Markov chain, Reducible chains, Markov chain with discrete and continuous space.

Module-II(14 hours)

Poisson process with related distribution, Generalization of Poisson process, Birth and death process, Erlang process, Brownian motion, Wiener process, Kolmogorov equations, First passage time distribution of Weiner process

Module-III(12 hours)

Renewal process, Renewal process in continuous time, Renewal equations, Wald's equation, Renewal theorem, delayed and equilibrium renewal process.

Text book

1. Stochastic Process by J. Medhi, New Age International Publication (2nd edition}

Reference book

1. Stochastic Process by Shedon M. Ross, Wiley & sons, (2nd edition)
2. Stochastic Process by D N Shanbhag, C R Rao, Gulf Publishing.
3. Stochastic Methods by Crispin Gardiner, Springer.
4. Probability, Random Variables and Stochastic Processes, 4th Edn., A. Papoulis and S. U. Pillai, TMH Publication.