

SYLLABUS

- 1. Electric Machinery Fundamentals** [20 %]
DC Generators, DC Motors, Transformers, Induction Machines, Synchronous Machines, Fractional horsepower motors.
- 2. Power System** [20%]
Fundamentals of Power System & Modeling, Transients in Power System, Load Flow Solution & Control , Load Frequency Control, Power System Stability, Optimal System operation, Symmetrical Fault Analysis, Unsymmetrical Fault Analysis, Economic Load Dispatch.
- 3. Transmission lines** [15%]
Short Transmission Line, Medium Transmission Line, Long Transmission Line, Power Flow Through Transmission Lines, Inductance, Resistance, Capacitance of Transmission Lines, Extra High Voltage (EHV) Transmission, FACTS, HVDC Transmission.
- 4. Distribution System** [10%]
AC Distribution, DC Distribution, Economics of Distribution System.
- 5. Power System Protection** [15%]
Protective Zones, Fuses, Reactors, Protective Relays, Power Circuit Breaker, Apparatus protection, Protection Against Lightning and Insulation Coordination, Power System Earthing, Substation, SCADA.
- 6. Electric Drives** [10%]
DC Drives, Stator Controlled Induction Motor Drives, Rotor Controlled Induction Motor drives, Synchronous Motor Drives.
- 7. Renewable Energy technologies (RET)** [10%]
Solar Photovoltaic, Wind Energy, Micro hydropower, Biomass, Biogas, Bio-fuel, Geothermal Energy, Wave, Tidal Energy etc