

EEE IV YEAR –I SEM

COURSE COUT COMES

ELECTRICAL DISTRIBUTION SYSTEMS

- CO 1.** Recall different type of loads, load modelling, load factor and the loss factors.
- CO 2.** Design the feeders based on the considerations of voltage levels and feeder loadings.
- CO 3.** Locate the substations and obtain the benefits derived through optimal location of the substations.
- CO 4.** Derive the equations for the voltage drops and power loss in the distribution lines.
- CO 5.** Solve the power factor correction and voltage control problems.
- CO 6.** Apply the knowledge of protection devices for locating the faults in the distribution systems.

POWER SYSTEM OPERATION AND CONTROL

- CO 1.** Apply the concept and principle of economic operation to thermal systems and hydrothermal systems and assess various methods to obtain the economic operation of power systems.
- CO 2.** Analyze and perform the tasks of modeling the generator, turbine, and speed governor.
- CO 3.** Distinguish load frequency control of single area and two area networks
- CO 4.** Identify the steady state and dynamic performance of single area and two area LFC.
- CO 5.** Compute reactive power control in transmission lines and compensation of reactive power.

Utilization of electrical energy

- CO 1.** Analyze the working of Electric Drives
- CO 2.** Articulate different types of Electric Heating and Illumination
- CO 3.** Discuss about electric Welding.
- CO 4.** Design Electric Traction
- CO 5.** Analyze and plot trapezoidal and quadrilateral speed time curves.

DIGITAL SIGNAL PROCESSING

- CO 1.** Distinguish digital and analog signals and systems.
- CO 2.** List the properties of discrete-time systems such as time-invariance, stability, causality, and linearity.
- CO 3.** Compute the linear and circular convolutions of discrete-time sequences using different methods.
- CO 4.** Apply the discrete Fourier transform (DFT) of a sequence, relate it to the DTFT, and use the DFT to Compute the linear convolution of two sequences.
- CO 5.** Apply various techniques to design digital filters (FIR and FIR).

High Voltage engineering

- CO 1.** Get a knowledge on high voltage technology and it's applications
- CO 2.** Explain the breakdown in gaseous, liquids and solids
- CO 3.** Analyze the generation and measurement of high voltages and high currents
- CO 4.** Investigate the different high voltage testing.

SWITCH GEAR AND PROTECTION

Upon successful completion of this course the students should be able to:

- CO 1.** Explain about the arc formation and how to interrupt the arc.
- CO 2.** Identify the difference between various relays and able to apply in different applications.
- CO 3.** Apply knowledge of protection for generator from various faults using suitable relay and solve the different numerical Problems.
- CO 4.** Apply knowledge of protection for transformer from various faults using suitable relay and solve the different numerical Problems on design of CT s Ratio, Buchholtz relay Protection.
- CO 5.** Study Feeder and Bus-Bar Protection, know the importance of grounding and different methods for different equipment