

Electrical Machines Lab

Description:

The Electrical Machines Laboratory has various electrical machines such as single phase transformers, DC Generators, DC motors, 3-phase induction motors and 3-phase Alternator. Students will do experiments on both static and rotating electrical machines, so, that they gain practical knowledge on speed control of various rotating motors and voltage control of transformers and alternators etc. The laboratory equipment can also be used for doing project works related to electrical machines and energy conversion. This lab experience will help the students for selection of motors and their application in various industries.



Power Systems Lab

Description:

Power system Laboratory has the required equipment to conduct experiments on measurement of sequence impedance of transformer and alternator, determination of dielectric strength of oil, calibration of tong tester etc. The laboratory is well equipped to meet the requirements of undergraduate. This lab will provide knowledge to the students on power system's area through practical demonstrations on power system generation, transmission and distribution concepts.



Electrical Circuits Lab

Description:

The objective of Electric Circuits laboratory is to impart hands on experience in verification of circuit laws and theorems, measurement of circuit parameters, study of circuit characteristics and simulation of RLC circuit for time domain analysis. It also provides practical exposure to the students on usage of CRO, power sources, function generator etc.



Electrical Measurements Lab

Description:

This lab comprises of phase shifting transformers, reactive load and various other equipment used for calibration and measurement of electrical quantities. This laboratory is equipped with all electrical bridge circuits like Kelvin's Double Bridge, Anderson's bridge, Schering Bridge to facilitate the measurement of unknown values of elements like resistor, capacitor and inductor. Errors in electrical measuring instruments can also be calibrated. Real and reactive power of unbalanced loads can also be measured.



Control Systems Lab

Description:

Control Systems Lab provides knowledge on main components of the control system and modeling & analysis of control system parameters of liketime domain, frequency domain and state-space approach etc. This laboratory is having sufficient equipment like synchros, PID controllers, stepper motor unit, Phase lead and lag compensator, AC servo motor, DC servo motor, AC position control trainer and DC position control trainer. The second order transfer function of a system can be simulated using operational amplifier kit. This lab is useful for the students for design and developmentof the projects related to various controllers like P,PI and PID. The response of the second order system can be obtained in time domain and frequency domains with necessary control models.



Power Electronics Lab

Description:

This laboratory helps the students to understand power electronic devices and power converters. The lab has the equipment to conduct experiments on:

- Determination of characteristics of various power electronic devices and analysis of thyristor firing circuits and commutation of SCR.
- To analyze the performance of single phase and three phase full wave bridge Converters with both resistive and inductive loads.
- To understand the operation of AC voltage regulator with resistive and inductive loads.
- To understand the working of Buck converter, Boost converter and single phase Inverter. To measure waveforms, Cathode Ray Oscilloscopes, Digital Oscilloscopes are available.
- Pulse generators are also available in the lab

