POWER ELECTRONICS CONVERTERS AND DRIVES LABORATORY-II

Course Code: 15EE2218

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LIST OF EXPERIMENTS

1. Simulation of Chopper fed DC motor drive using MATLAB/SIMULINK
2. Simulation for the study of four quadrant operation of DC drives using dual converter.
3. Simulation of 3-phase PWM Inverter with sinusoidal pulse-width modulation using MATLAB/SIMULINK.
4. Characteristics of induction machines under balanced and symmetrical conditions for the following using MATLAB/SIMULINK a. dq model in synchronous reference frame. b. dq model in stator reference frame c. dq model in rotor reference frame.
5. Simulation of v/f control of an induction motor drive using MATLAB/SIMULINK.
6. Simulation of Open-loop v/f control of a synchronous motor drive using MATLAB/SIMULINK.
7. Simulation of ZVS/ZCS resonant converter.
8. Performance &speed control of 1-phase Induction motors with A.C. voltage controllers.
9. Performance & Speed control of three phase Induction Motor with v/f control.
10. Performance & Operation of a three phase Induction motor fed from 3-phase A.C. Voltage controller.

TEXT BOOKS:

1. Ned Mohan, Tore M. Undeland and William P. Robbins, "*Power Electronics*", John Wiley & Sons, 2007.

2. Md. H. Rashid, "*Power Electronics*", Pearson Education, Third Edition, 2008.
3. Bimal K. Bose, "*Modern Power Electronics and AC Drives*", Prentice-hall Of India Pvt. Ltd, 2008.
4. Rashid, M., "*Simulation of Power Electronic Circuits using PSPICE*", PHI, 2006.