

Course code	Course Name	L-T-P-Credits	Year of Introduction
EE336	Electrical and Electronics Engineering Lab	0-0-3-1	2016
Prerequisite : EE312 Electrical and electronics engineering			
Course Objective <ul style="list-style-type: none"> • To provide necessary practical knowledge related to the theory of electrical machines such as transformers, induction machines and dc machines. • To study the characteristics of normal diodes and Zener diodes • To familiarize with various instruments like CRO, multi-meters etc. used to measure electrical quantities.. • To do a simple project which can be performed in groups is given. 			
List of Experiments <ol style="list-style-type: none"> 1. Single phase transformer – load test 2. Single phase transformer-OC and SC test- determination of approximate equivalent circuits-pre-determination of efficiency and regulation. 3. Starting of three phase induction motor using different kinds of starters (squirrel cage and slip ring)-observation of currents and voltages. 4. Load test on three phase squirrel cage /slip ring induction motors. 5. DC shunt generator magnetization characteristics plot (determination of critical field resistance and critical speed). 6. DC shunt generator load test. 7. DC compound generator load test (cumulative and differential). 8. Observation of diode characteristics on CRO. 9. Zener diode characteristics. 10. Project : The students can do a project related to designing a timer using IC 555 to understand the application of such timer ICs. The timer should be able to keep a light on for a given period. They can do the project in groups. Any other interesting project using IC 555 can also be tried. 			
<p style="text-align: center;">Expected outcome:</p> <p>The students will be able to</p> <ol style="list-style-type: none"> i. Understand the principles of electrical machines ii. Do characteristic tests on transformers, induction motors and DC generators iii. Visualise diode characteristics on CRO iv. Execute simple projects using IC 555 			