

<b>ELECTRICAL MACHINES LABORATORY - 2</b> <b>B.E., IV Semester, Electrical and Electronics Engineering [As per</b> <b>Choice Based Credit System (CBCS) scheme]</b>			
<b>Course Code</b>	<b>17EEL47</b>	<b>CIE Marks</b>	<b>40</b>
<b>Number of Practical Hours/Week</b>	<b>03=(1 hour instruction and 2 hour laboratory</b>	<b>SEE Marks</b>	<b>60</b>
<b>RBT levels</b>	<b>L1,L2,L3</b>	<b>Exam Hours</b>	<b>03</b>
<b>Credits - 02</b>			
<b>Course Objectives:</b>			
<ul style="list-style-type: none"> <li>• To perform tests on dc machines to determine their characteristics.</li> <li>• To control the speed of dc motor.</li> <li>• To conduct test for pre-determination of the performance characteristics of dc machines</li> <li>• To conduct load test on single phase and three phase induction motor.</li> <li>• To conduct test on induction motor to determine the performance characteristics.</li> <li>• To conduct test on synchronous motor to draw the performance curves. ■</li> </ul>			
<b>Sl. No</b>	<b>Experiments</b>		
1	Load test on dc shunt motor to draw speed – torque and horse power – efficiency characteristics.		
2	Field Test on dc series machines.		
3	Speed control of dc shunt motor by armature and field control.		
4	Swinburne's Test on dc motor.		
5	Retardation test on dc shunt motor.		
6	Regenerative test on dc shunt machines.		
7	Load test on three phase induction motor.		
8	No - load and Blocked rotor test on three phase induction motor to draw (i) equivalent circuit and (ii) circle diagram. Determination of performance parameters at different load conditions from (i) and (ii).		
9	Load test on induction generator.		
10	Load test on single phase induction motor to draw output versus torque, current, power and efficiency characteristics.		
11	Conduct suitable tests to draw the equivalent circuit of single phase induction motor and determine performance parameters.		
12	Conduct an experiment to draw curves of synchronous motor at no load and load conditions.		
<b>Revised Bloom's Taxonomy Level</b>	L <sub>3</sub> – Applying, L <sub>4</sub> – Analysing, L <sub>5</sub> – Evaluating, L <sub>6</sub> – Creating		
<b>Course Outcomes:</b>			
At the end of the course the student will be able to:			
<ul style="list-style-type: none"> <li>• Test dc machines to determine their characteristics.</li> <li>• Control the speed of dc motor.</li> <li>• Pre-determine the performance characteristics of dc machines by conducting suitable tests.</li> <li>• Perform load test on single phase and three phase induction motor to assess its performance.</li> <li>• Conduct test on induction motor to pre-determine the performance characteristics.</li> <li>• Conduct test on synchronous motor to draw the performance curves.</li> </ul>			
<b>Graduate Attributes (As per NBA)</b>			
Engineering Knowledge, Individual and Team work, Communication.			
<b>Conduct of Practical Examination:</b>			
<ol style="list-style-type: none"> <li>1. All laboratory experiments are to be included for practical examination.</li> <li>2. Breakup of marks and the instructions printed on the cover page of answer script to be strictly adhered by the examiners.</li> <li>3. Students can pick one experiment from the questions lot prepared by the examiners.</li> <li>4. Change of experiment is allowed only once and 15% Marks allotted to the procedure part to be made zero.</li> </ol>			