

<b>SEMESTER</b>	<b>DEPARTMENT</b>	<b>COURSE TITLE</b>
<i>Fifth</i>	<i>Power Engineering</i>	<i>Power Transformers Lab</i>
<b>COURSE CODE</b>	<b>HOURS: 3</b>	<b>COURSE SPECIFICATIONS</b>
<i>EP510</i>	<b>UNITS: 1</b>	<i>Practical Content</i>
<p><b>1. Describe the Components and Construction of Transformers.</b></p> <p>Introduction:</p> <ul style="list-style-type: none"> <li>➤ Describe the single phase, three phase transformers.</li> <li>➤ To name each part of transformer.</li> <li>➤ Assemble a transformer.</li> </ul>		
<p><b>2. Define the Different Types of Transformer Windings, Connections and Their Importance. Transformer's Oil Characteristics. Transformer Cooling Types.</b></p> <ul style="list-style-type: none"> <li>➤ Define the different types of transformer winding and understand the advantages and disadvantages of each.</li> <li>➤ Get familiar with transformer's oil characteristics and cooling principles.</li> </ul>		
<p><b>3. Define the Types of Cores' Laminations and Their Different Types of Assembling.</b></p> <ul style="list-style-type: none"> <li>➤ Collect and assemble core laminations.</li> <li>➤ Understand the advantage and disadvantage of each principle of collecting laminations.</li> </ul>		
<p><b>4. Carry Out the Open Circuit and Short Circuit Tests.</b></p> <ul style="list-style-type: none"> <li>➤ Carry out the open circuit and short circuit test on a transformer.</li> <li>➤ Compare results with the transformer name plate.</li> </ul>		
<p><b>5. Get Familiar with Different Types of Tap-Changers Used in Transformers.</b></p>		
<p><b>6. Study the effect of different types of faults in transformers and transformer protection.</b></p> <ul style="list-style-type: none"> <li>➤ Learn the effect of different types of faults in transformers, and various protection principles</li> </ul>		
<p><b>References:</b></p> <p>1- <i>Electric Power Systems</i>. B.M. Weedy</p> <p>2- <i>Library of Schneider Company</i>.</p> <p>3- <i>Library of Siemens Company</i></p>		