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| **Course Code** | **Course Name** | **L-T-P - Credits** |
| **EE 151** | **BASIC ELECTRICAL ENGINEERING LAB** |  **0-0-2 : 1** |
| **Prerequisite: NIL Corequisite: Basic Electrical Engineering** |
| **Course Objective:** To provide practical knowledge in verification of principle of circuit theory and measuring current, voltage, maximum power transfer, analysis of basic RLC circuit, elementary star/delta connection and understanding different types of circuits. |
| **Syllabus (List of Experiments)** |
| 1. | To study and verify the Kirchhoff’s Voltage Law and Kirchhoff’s Current Law applied to D.C. circuit. |
| 2. | To study and verify the Maximum Power Transfer Theorem. |
| 3. | To study and measure the inductance of choke coil. |
| 4. | To study and obtain the *v-i* characteristics of a Fluorescent Lamp. |
| 5. | To study and perform amplitude, frequency and phase measurements using calibrated cathode ray oscilloscope. |
| 6. | To study the R-L-C series circuit, it is connected to an AC supply and the voltage, current, power are consumed. The relations to be verified by drawing the phasor diagram.  |
| 7. | To study the R-L-C Parallel circuit,and the relations of currents and voltages in different branches .The relations to be verified by drawing the phasor diagram. |
| 8. | To determine equivalent circuit parameters, efficiency and regulation of a single phase transformer by conducting OC and SC tests. |
| 9. | Verify the relation of phase and line value of voltage and current in 3 Phase Star and Delta balanced connection.  |
| 10. | Measuremnt and verification of 3-ɸ power in star and delta connection.  |
| **Supplementary Readings:**1. W.H. Hayt, J.E. Kemmerley, “Engineering circuit analysis”, Int. St. Ed. McGraw Hill.
2. John Bird, “Electrical Circuit Theory and Technology”, Routledge, Taylor & Francis Group.
3. V.N Mittle, “Basic Electrical Engineering”, Tata McGraw Hill, 2nd edition 2017.
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