**Lesson Plan**

Name of the Faculty : Mr. Sanjay Charaya

Discipline : Civil Engineering & Mechanical Engineering

Semester :1st Semester

Subject : Electrical Technology

Lesson Plan Duration: 15 weeks

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| Week | Theory | Practical |
| Lecture | Topic | Practical | Topic |
| 1 | 1 | Basics of ET | 1 | To verify KVL & KCL. |
| 2 | Circuit Element Classification | 2 | To verify Superposition Theorem on a linear circuit. |
| 3 | KVL with numericals | 3 | To verify Thevenin Theorem on a linear circuit. |
| 2 | 4 | KCL with numericals | 4 | To verify Norton Theorem on a linear circuit. |
| 5 | Star-Delta Transformation | 5 | To study Frequency Response of a series RLC circuit and determine fr. |
| 6 | Delta-Star Transformation | 6 | To perform OC & SC test on a single phase transformer. |
| 3 | 7 | Superpositon Theorem | 7 | To perform speed control of DC motor. |
| 8 | Thevenin Theorem | 8 | To perform starting & reversal of direction of a three phase induction motor. |
| 9 | Nortons Theorem | 9 | Measurement of power in a three phase system. |
| 4 | 10 | Maximum Power Transfer Theorem | 10 | To calibrate a single phase energy meter. |
| 11 | Numericals Practice |  |  |
| 12 | Numericals Practice |  |  |
| 5 | 13 | AC fundamentals |  |  |
| 14 | Polar & Rectangular Form |  |  |
| 15 | Addition & Subtraction of AQ |  |  |
| 6 | 16 | Rectified Waveforms |  |  |
| 17 | Generating of Alternating EMF |  |  |
| 18 | Numericals Practice |  |  |
| 7 | 19 | AC Circuits |  |  |
| 20 | RL & RC AC circuit |  |  |
| 21 | RLC Series Circuit |  |  |
| 8 | 22 | RLC Parallel Circuit |  |  |
| 23 | Resonance |  |  |
| 24 | Q-factor and Bandwidth |  |  |
| 9 | 25 | Balanced 3-Phase System |  |  |
| 26 | Phase & Line Voltage |  |  |
| 27 | Star & Delta Connection |  |  |
| 10 | 28 | Two Wattmeter Method |  |  |
| 29 | Numericals Practice |  |  |
| 30 | Phase Sequence |  |  |
| 11 | 31 | Laws of EMI |  |  |
| 32 | Self & Mutual Induction |  |  |
| 33 | Magnetic Flux & MMF |  |  |
| 12 | 34 | Losses |  |  |
| 35 | Transformer |  |  |
| 36 | EMF Equation |  |  |
| 13 | 37 | Phasor Diagram |  |  |
| 38 | Losses & Efficiency |  |  |
| 39 | OC & SC test |  |  |
| 14 | 40 | DC Machines |  |  |
| 41 | Working |  |  |
| 42 | Types Of DC Machine |  |  |
| 15 | 43 | AC Machines |  |  |
| 44 | Working |  |  |
| 45 | Concept of Slip |  |  |