

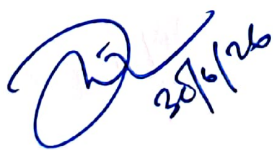
Lesson Plan: DC Machines and Transformers Laboratory

Prepared By- Sri Chandramani Mahapatra, Lect. St.-II (Electrical)

Semester: 3rd (Winter 2026)

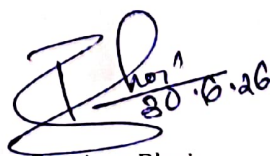
Date: 01-07-2026 to 05-11-2026

WEEK	TOPICS
Week 1	Introduction to DC machines laboratory, safety precautions, identification of parts and tools,
Week 2	1. Dismantling of DC machine.
Week 3	2. Reverse the direction of rotation of the DC shunt motor.
Week 4	3. Control the speed of DC shunt motor by field flux and armature voltage control methods.
Week 5	Evaluation and Viva Voce
Week 6	4. Perform the brake test on DC series motor.
Week 7	5. Check the functioning of single phase transformer
Week 8	6. Determine regulation and efficiency of single phase transformer by direct loading
Week 9	Evaluation and Viva Voce
Week 10	7. Perform open circuit and short circuit test on single phase transformer to determine equivalent circuit constants, voltage regulation and efficiency
Week 11	8. Perform parallel operation of two single-phase transformers to determine the load current sharing.
Week 12	Evaluation and Viva Voce
Week 13	9. Perform polarity test on a single-phase transformer whose polarity markings are masked.
Week 14	10. Connect the autotransformer in step-up and step-down modes noting the input/output readings.
Week 15	Evaluation and Viva Voce



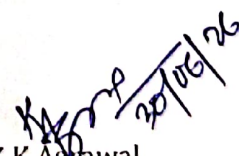
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