



मोटर वाहन विद्युतकीय एवं अणुविद्युतकीय प्रयोगशाला Automotive Electrical & Electronics Lab

Major Equipments:

- Two Wheeler Electric System
- BMW Engine with Transmission unit
- Cut Section Mock Layout Of A Motor Car Electrical System (With Charging Ignition And Lighting Timing System)
- Demonstration Board Of Electronic Ignition System, Of An Automobile Four Wheeler
- Horn Relay Circuit Of Four Wheeler
- Wiper Circuit



Measuring Instruments:

Ammeter, Voltmeter, Hydrometer, Thermometer



In Charge

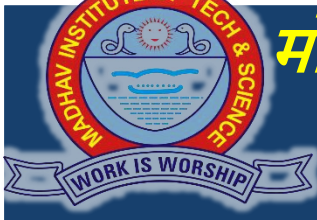
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Associate In Charge

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Department Of Mechanical Engineering



मोटर वाहन विद्युतकीय एवं अणुविद्युतकीय प्रयोगशाला

Automotive Electrical & Electronics Lab

SAFETY AND SECURITY RULES TO BE FOLLOWED IN LABORATORY:

1. Always wear shoes before entering in the lab.
2. Do not touch anything without the permission of instructor/ lab assistant.
3. Read carefully the lab manual before performing experiments.
4. Do not tamper measuring instruments.
5. Do not open the casing of the equipment.
6. Switch off the power supply to the experimental setup on completion of the experiment.
7. Maintain clean and orderly laboratories and work area.
8. Be aware of the various experiment controls (start button, stop button, speed control) for each experiments.
9. Do not leave experiments running unattended.
10. Any injuries should be reported immediately for proper care.

GENERAL INSTRUCTIONS

1. Enter lab with closed footwear.
2. Boys should tuck in the shirts.
3. Long hair should be protected, let it not be loose specially near rotating machineries.
4. Any other machines/ equipments should not be operated other than the prescribed one for that day.
5. Power supply to your test table should be obtained only through the lab technician/ instructor.
6. Read carefully the lab manual before performing experiments.
7. Do not lean and do not be close to the rotating components.
8. Tools, apparatus and gauge sets are to be returned before leaving the laboratory.
9. Headings and detail should be neatly written:
 - (i) Aim of the Experiment.
 - (ii) Apparatus / Tools / Instruments Required.
 - (iii) Procedure / Theory / Algorithm/ Program.
 - (iv) Model Calculations.
 - (v) Neat Diagram/ Flowcharts.
 - (vi) Specification / Design Details.
 - (vii) Tabulation.
 - (viii) Graph.
 - (ix) Result / Discussions.
10. Before doing the experiment, the student should get the circuit/ program approval by the faculty in charge.
11. Experiment date should be written in the appropriate place.
12. After completing the experiments the answer to the viva voice questions should be neatly written in the workbook.
13. Be patient, steady, systematic and regular.



LIST OF EXPERIMENTS:

- 1. Experiment on testing and study of different types of Batteries and constructions.**
- 2. Testing, dismantling and assembling of starter motor used in automobile.**
- 3. Testing, dismantling and assembling of alternator used in automobile.**
- 4. Study of different colour code system used in automotive wiring system.**
- 5. Demonstration and study of Battery Ignition System and their parts used in Automobile Vehicles.**
- 6. Study of different Electrical Equipment's & Accessories (Speedometer, Warning lights, Electric Horn, Wind shield wipers system).**
- 7. Study of different sensor used in modern automotive system.**
- 8. Study of various electronics system (Electronic fuel injection system, Electronic ignition system, Air bag, ABS, Electronic fuel injector cleaner).**
- 9. Demonstration and experiment on lighting system of two wheeler and Four Wheeler.**
- 10. Demonstration, experiment and diagnosis on ignition system.**
- 11. Demonstration and experiment on automotive dashboard instruments.**