

## I.C. ENGINE AND AUTOMOBILE LAB

Name of Lab In-charge: Mr. Mahesh Prasad Pandey

Name of technical assistant: Mr. Ranjeet Gupta

Course Outcomes:

S. No.	Outcomes
1	Understand the working principle of Ignition and Fuel supply system of an automobile.
2	Explain the basic components of an Automobile chassis and determine the Gear ratio.
3	Understand the control system of an automobile.

**List of Equipment:**

1. Synchronesh Gear Box.
2. Suspension system
3. 2 stroke and 4 stroke petrol engines
4. Total electrical system
5. Cooling system.
6. Lubrication system
7. Fuel supply of petrol engine
8. Power steering system
9. Cut section of recirculate ball steering
10. Rack & pinion steering system
11. Worm & nut type steering system
12. Ignition system.

**List of Experiments:**

Sr. No.	As per AKTU	Performed/ Not performed
1	Performance Analysis of Four stroke S.I. Engine- Determination of indicated and brake thermal efficiency, specific fuel consumption at different loads, Energy Balance.	
2	Determination of Indicated H.P. of I.C. Engine by Morse Test.	
3	Performance Analysis of Four stroke C.I. Engine- Determination of indicated and brake thermal efficiency, specific fuel consumption at different loads, Energy Balance	
4	Study & experiment on Valve mechanism.	
5	Study & experiment on Gear Box.	YES
6	Study & experiment on Differential Gear Mechanism of Rear Axle.	YES

7	Study & experiment on Steering Mechanism.	YES
8	Study & experiment on Automobile Braking System.	YES
9	Study & experiment on Chassis and Suspension System.	YES
10	Study & experiment on Ignition system of I.C. Engine.	YES
11	Study & experiment on Fuel Supply System of S.I. Engines- Carburetor, Fuel Injection Pump and MPFI	YES
12	Study & experiment on Fuel Supply System of C.I. Engines- Injector & Fuel Pump.	YES
13	Study & experiment on Air Conditioning System of an Automobile.	
14	Comparative study of technical specifications of common small cars (such as Maruti Swift, Hyundai i20, Chevrolet Aveo, Tata Indica, Ford Fusion etc.	
15	Comparative study & technical features of common scooters & motorcycles available in India.	
16	Visit of an Automobile factory.	YES
17	Visit to a Modern Automobile Workshop.	
18	Experiment on Engine Tuning.	
19	Experiment on Exhaust Gas Analysis of an I.C. Engine.	

**Pictures of Labs:**