

32056 – THERMAL AND AUTOMOBILE ENGINEERING PRACTICAL

DETAILED SYLLABUS

OBJECTIVES

- Determine the flash and fire point of oil by using open & closed cup apparatus
- Determine the absolute viscosity by using redwood & saybolt viscometer
- Draw the valve timing diagram of petrol or diesel engines.
- Draw the port timing diagram of petrol or diesel engines.
- Conduct performance test on petrol or diesel engines.
- Prepare a heat balance sheet petrol or diesel engines.
- Prepare a Morse test on a petrol or diesel engines.
- Identify the various tools and their applications used in Automobile.
- Dismantle and assemble fuel injection pump & fuel injectors.
- Dismantle and assemble of power transmission and differential unit.
- Dismantle and assemble steering gear box. Testing and charging of batteries.
- Overhauling of starter motor, alternator & dynamo.

List of Experiments

PART-A

- 1) Determine flash and fire point of the given oil by using open cup apparatus and closed cup apparatus.
- 2) Determine the absolute viscosity of the given lubricating oil by using Redwood viscometer / say bolt viscometer.
- 3) Draw a Port timing diagram of two stroke petrol / diesel Engines.
- 4) Draw a Valve time diagram for four stroke petrol / diesel engines.
- 5) To conduct a load test on a petrol / diesel Engines.
- 6) To conduct a Morse test on multi cylinder petrol / diesel engines.
- 7) To conduct a Heat balance test on a Four Stroke Petrol (or) Diesel engines.

PART-B

- 1) Dismantling, assembling of pressure plate, clutch plate and steering gear box.
- 2) Dismantling, inspecting and assembling of gear box and find out the gear ratios.
- 3) Dismantling, inspecting and assembling of final drive and differential units. Adjusting of backlash and correct tooth contact of crown and pinion of differential unit.

- 4) Removing camshaft, replacing timing gears, removing valves and adjusting valve clearance.
- 5) Removing, servicing and replacing Solex carburettor (OR) MPFI system.
- 6) Dismantling and assembling of inline fuel injection pump (OR) CRDI system and Injectors
- 7) Test a battery with specific gravity test and charge the battery with constant ampere/voltage method. Dismantling, overhauling and assembling of starter motor and alternator (OR) dynamo.