

MARTHANDAM COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
ENGINEERING PRACTICES LABORATORY

Major Equipments Available in the Lab

Sl.No	Name of the Equipments	Specification	Quantity
1.	Arc welding Unit	Welding Current : 20-400A Input Supply : 380-440 V, 3Ph, 50/60Hz	05nos
2.	Gas welding unit	Voltage : 220-240 V Frequency : 50-60 Hz	02 nos
3.	Lathe Machines	Brand : Accumax Carriage Size : 375*400mm Cross slide Size : 175*400mm	05 nos
4.	Drilling Machines	Drill depth (mm) : 175-300 Hole Diameter : 25-50mm Item weight : 70kg Spindle Speed : 105-2600rpm	05 nos
5.	Cope and drag box	Wooden Material Limited Size	05 nos
6.	Pattern	Wooden material	05 nos

COURSES OFFERED

Sl.No	Odd Sem (Course code & Name)	Class	Even Sem (Course code & Name)	Class
1	-	-	GE3271 Engineering Practices Laboratory	I Year

OBJECTIVES:

- Drawing pipe line plan; laying and connecting various pipe fittings used in common household plumbing work; Sawing; planing; making joints in wood materials used in common household.
- Welding various joints in steel plates using arc welding work; Machining various simple processes like turning, drilling, tapping in parts; Assembling simple mechanical assembly of common household equipments; Making a tray out of metal sheet using sheet metal work.

OUTCOMES:

- Draw pipe line plan; lay and connect various pipe fittings used in common household plumbing work; Saw; plan; make joints in wood materials used in common household wood.
- Weld various joints in steel plates using arc welding work; Machine various simple processes like turning, drilling, tapping in parts; Assemble simple mechanical assembly of common household equipments; Make a tray out of metal sheet using sheet metal work.

LIST OF EXPERIMENTS**GROUP –A (CIVIL)****CIVIL ENGINEERING PRACTICES****PLUMBING WORK:**

- a) Connecting various basic pipe fittings like valves, taps, coupling, unions, reducers, elbows and other components which are commonly used in household.
- b) Preparing plumbing line sketches.
- c) Laying pipe connection to the suction side of a pump
- d) Laying pipe connection to the delivery side of a pump.
- e) Connecting pipes of different materials: Metal, plastic and flexible pipes used in household appliances.

WOOD WORK:

- a) Sawing,
- b) Planing and
- c) Making joints like T-Joint, Mortise joint and Tenon joint and Dovetail joint.

Wood Work Study:

- a) Studying joints in door panels and wooden furniture
- b) Studying common industrial trusses using models.

GROUP – B (MECHANICAL)

MECHANICAL ENGINEERING PRACTICES

WELDING WORK:

- a) Welding of Butt Joints, Lap Joints, and Tee Joints using arc welding.
- b) Practicing gas welding.

BASIC MACHINING WORK:

- a) (simple)Turning.
- b) (simple)Drilling.
- c) (simple)Tapping.

ASSEMBLY WORK:

- a) Assembling a centrifugal pump.
- b) Assembling a household mixer.
- c) Assembling an air conditioner.

SHEET METAL WORK:

- a) Making of a square tray

FOUNDRY WORK:

- a) Demonstrating basic foundry operations.