

# ADVANCED WELDING LAB

(Skill Oriented Course Elective – I/II)

Course Code: 22ME11S2

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1 0 2 2

**Course Outcomes:** At the end of the course, the student will be able to

CO1: Use oxy-fuel welding machine for gas cutting and welding

CO2: demonstrate MMAW machine in different positions for welding joints

CO3: Use GMAW machine in different positions for welding joints

CO4: demonstrate GTAW machine in different positions for welding joints CO5:

Illustrate simulation of MMAW, GMAW and GTAW

## LIST OF EXERCISES

Note: Any 12 exercises of the following are to be performed.

### I. OXY-FUEL GAS CUTTING

1. Straight Line Cutting
2. Bevel Cutting

### II. OXY-FUEL GAS WELDING

3. Preparation of straight line beads with filler wire
4. Preparation of square butt joint welding

### III. MANUAL METAL ARC WELDING

5. Preparation of Butt joint in Flat Position
6. Preparation of Lap joint in Horizontal Position
7. Preparation of T joint in Vertical Position

### IV. GAS METAL ARC WELDING

8. Preparation of T joint in Flat Position
9. Preparation of Butt joint in Horizontal Position
10. Preparation of Lap joint in Vertical Position

### V. GAS TUNGSTEN ARC WELDING

11. Preparation of Lap joint in Flat Position
12. Preparation of T joint in Horizontal Position
13. Preparation of Butt joint in Vertical Position

### VI. SIMULATION OF WELDING

14. Simulation of MMAW welding
15. Simulation of GMAW welding
16. Simulation of GTAW welding