



# उत्पादन प्रयोगशाला

## PRODUCTION LAB

### Major Equipments:

- Lathe Machine
- Milling Machine
- Drilling Machine
- Grinding Machine
- Electro Chemical Machining
- Electric arc Welding Plant
- Gas welding Equipment



#### Professor In Charge:

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### **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.



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(120405/190405)

**LIST OF EXPERIMENTS:**

1. Step Turning and Taper Turning on Lathe.
2. Threads Cutting and Knurling on Lathe.
3. Machining Flat Surface using Shaper Machine.
4. Manufacturing of Spur Gear using Milling Machine.
5. Making Internal Splines using Slotting Machine.
6. Hole on workpiece through Drilling.
7. Grinding of Single Point Cutting Tool
8. Slot/Groove cutting using shaping machine.
9. Performance on mold making of Simple component
10. Performance on pattern making of Simple component
11. Performance on Metal Casting of Simple component
12. Performance on Welding of simple work piece (Example Arc Welding)
13. Performance on Sheet metal work of Simple component
14. Performance on hot forging of Simple component