

OBJECTIVES:

- To expose the students to the testing of different materials under the action of various forces and determination of their characteristics experimentally.

LIST OF EXPERIMENTS

- Tension test on mild steel rod
- Compression test on wood
- Double shear test on metal
- Torsion test on mild steel rod
- Impact test on metal specimen (Izod and Charpy)
- Hardness test on metals (Rockwell and Brinell Hardness Tests)
- Deflection test on metal beam
- Compression test on helical spring
- Deflection test on carriage spring
- Test on Cement

TOTAL: 45 PERIODS**OUTCOMES:**

- The students will have the required knowledge in the area of testing of materials and components of structural elements experimentally.

REFERENCES:

- Strength of Materials Laboratory Manual, Anna University, Chennai - 600 025.
- IS1786-2008, Specification for cold worked steel high strength deformed bars for concrete reinforcement, 2008

LIST OF EQUIPMENT FOR A BATCH OF 30 STUDENTS

Sl. No.	Description of Equipment	Quantity
1.	UTM of minimum 400 kN capacity	1
2.	Torsion testing machine for steel rods	1
3.	Izod impact testing machine	1
4.	Hardness testing machine Rockwell } Vicker"s } (any 2) Brinell }	1 each
5.	Beam deflection test apparatus	1
6.	Extensometer	1
7.	Compressometer	1
8.	Dial gauges	Few
9	Le Chatelier"s apparatus	2
10	Vicat"s apparatus	2
11	Mortar cube moulds	10