II Year – I SEMESTER

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0	3	2

MECHANICS OF SOLIDS & METALLURGY LAB

Course Objective:

To impart practical exposure on the microstructures of various materials and their hardness evaluation. Also to impart practical knowledge on the evaluation of material properties through various destructive testing procedures.

NOTE : Any 6 experiments from each section A and B.

(A) MECHNICS OF SOLIDS LAB :

1. Direct tension test
2. Bending test on
   a) Simple supported
   b) Cantilever beam
3. Torsion test
4. Hardness test
   a) Brinells hardness test
   b) Rockwell hardness test
5. Test on springs
6. Compression test on cube
7. Impact test
8. Punch shear test

(B) METALLURGY LAB :

1. Preparation and study of the Micro Structure of pure metals like Iron, Cu and Al.
2. Preparation and study of the Microstructure of Mild steels, low carbon steels, high – C steels.
3. Study of the Micro Structures of Cast Irons.
4. Study of the Micro Structures of Non-Ferrous alloys.
5. Study of the Micro structures of Heat treated steels.
6. Hardeneability of steels by Jominy End Quench Test.
7. To find out the hardness of various treated and untreated steels.