

Tilak Maharashtra University
Diploma in Engineering
SUB: Engineering Materials.

Year –FY Branch- E&TC/Comp/Mech Semester -1st

Assignment No: I

(Write any five)

- Q.1 Classify engineering materials.
- Q.2 Which are non ferrous metal alloys.
- Q.3 Which are important properties of 'Bearing Materials'
- Q.4 Classify refractories.
- Q.5 Which are main purposes of heat treatment of steel.
- Q.6 Define - Elastic limit
Resilience
Toughness
- Q.7 Explain Tensile and compression tests.
- Q.8 Name all important hardness tests carried out in engineering industries. Q.9
Write advantages of Rockwell hardness test.

Assignment No: II

(Write any five)

- Q.1 Define - ferrite and Austenite Q.2
Explain classification of 'steels'.
Or
- Q.2 What are limitations of 'plain carbon steels'
- Q.3 What are various heat treatments used for stainless steels.
Or
- Q.3 What are special purpose steels' write their application in practice.
- Q.4 State advantages of cast iron over steel.
Or
- Q.4 Write short note on - Albu cast iron.
- Q.5 Explain any two copper-nickel alloys with respect to their composition, properties
& uses.
Or
- Q.5 What are requirements of Bearing Materials.
Or
- Q.5 What is 'cartridge brass' and Manganese bronze.

Assignment No: III

(Write any five)

- Q.1 What are ceramics and state their important properties.
- Q.2 What is 'clay' and its properties.
- Q.3 How is the 'cement' manufactured.
- Q.4 What are properties of 'Glass'. State any four uses & glass in industrial application.
- Q.5 What are refractories and its properties. Q.6 What is plastic and how are they formed.

(Write any two)

- Q.1 Differentiate between thermo setting and thermoplastics.
- Q.2 Write short note on fillers and plasticizers.
- Q.3 State and explain properties of synthetic rubber.
- Q.4 Explain vulcanization of rubber.

(Write any one)

- Q.1 Define corrosion and state its types.
Or
- Q.2 Explain Galvanizing and sherardizing processes.
Or
- Q.3 Write short note on — Metal spraying and Tinning.