Question Bank (G scheme)

Name of subject:MECHANICAL ENGINEERING MATERIAL **Unit Test :I**

Subject code: 17303 **Course : ME**

Semester: III

Chapter1 Engg. Materials- Structure and Properties

Questions for 3 Marks

(1)Define : (i)Strength (ii) hardness iii) Elasticity

(2)Explain the terms : (i)Toughness (ii)Stiffness

(3) Explain the terms i) Creep (ii) Fatigue

(4)Draw the following structures (i)BCC (ii) FCC(iii) HCP

(5) List the types of cast irons.

(6) Explain the term packing efficiency

(7) Define :(i)Thermal conductivity (ii)Machinability.

4maks questions

(1) Give the classification of engineering materials.
(2) Explain the terms unit cell and space lattice.
(3) Give the classification of different properties of materials.
(4) Explain the terms :(i) Polymorphism (ii) Co-efficient of linear expansion.

Chapter2 Equilibrium diagrams

Questions for 3 Marks

(1)Define the terms (i) Austenite (ii) Pearlite.

(2)Define the terms (i) Ferrite(ii) Cementite.

(3)Define the terms (i) Solid solution(ii)Solid solubility.

(4)Define the terms (i)Hypoeutectoid Steels (ii)Hypereutectoid steels (iii) Eutectoid steels

(5) Give the classification of steels depending on the percentage of carbon.

(6) Define the terms (i) Pure Metal(ii) Alloy

4maks questions

(1)Draw iron-carbon Equilibrium diagram and label the temperatures, compositions and phases on it.

(2)Explain solidification of metal with neat sketch.

(3)Give the classification of steels in details.

(4)What are the different critical temperatures and mention its significance during heating or cooling.

(5)What are the properties of low carbon steels and mention its applications.

(6)What are the properties of medium carbon steels and mention its applications.

(7)What are the properties of highcarbon steels and mention its applications

. Chapter 3 Heat treatment of steels

3 maks questions

(1) Define : (i)Heat treatment (ii) Hardening iii) Tempering
(2) Give the types of annealing.
(3) Define (i) Annealing (ii) Normalizing
(4) What did you mean by TTT curve?

4maks questions

(1) Differentiate between annealing and normalizing.
(2) Explain spheroidial annealing.
(3) Explain subcritical annealing.
(4) Explain Martempering with TTT curve.
(5) Explain Austempring with TTT curve.
(6) List the objectives of heat treatment.