MEM Questions Bank-3

Q.1 Solve the following question (2 marks)

1) Define hardness and toughness

2) State the percentage of carbon in low carbon steel.

3) State the purpose of normalizing.

4) State any four objectives of heat treatment.

5) Why different alloying elements are used in tool steel?

6) State any two applications of gray cast iron.

7) What is bronze? Classify it.

8) Give any two applications of gun metal.

9) State the applications of polyester

10) Classify the types of polymer materials.

11) State the different powder making process.

12) List any four thermal properties of materials.

13) Give chemical composition of Duralium.

14) State four properties of thermoplastics.

15)Define pure metals. Give two examples.

16) List applications of nano materials.

Q.2 Solve the following question (4 marks)

1. What is an equilibrium diagram? State its significance

2. Compare hardening and tempering process.

3. What is annealing? State its applications.

4. Explain case carburising process

5. Give properties of bearing materials. List any four bearing materials.

6. Distinguish between thermoplastic and thermosetting.

7. What is stainless steel? Give its applications.

8. What is tool steel? List four properties of it.

9. Compare destructive and non destructive testing.

10. Calculate packing efficiency of body centered cubic structure.

11. Explain the TTT diagram?

12. Give two applications of:

i) Ceramics

ii) Asbestos

13. What is cast iron? Give its classification.14. State the advantages and disadvantages of powder metallurgy

15. State the different properties of composites material (any four).

16. Give the chemical composition of the following copper alloys.

i) Naval brass iii) Gun metal

ii) Muntz metal iv) Bronze