

SECTION-B

2. What are various kinds of defects in solids? Write a brief note on Twin boundaries.
3. Discuss various diffusion mechanisms.
4. Draw and label phase diagram for binary Eutectic system. Explain the difference between eutectic and eutectoid reactions.
5. Distinguish between annealing and normalizing treatments.
6. Write brief note on induction hardening treatment.

SECTION-C

7. Draw and level Fe-FeC₃ diagram. Write various invariant reactions observed in this system. Discuss the cooling of eutectoid steel from liquid range to room temperature.
8. Discuss the purpose of alloying plain carbon steels. Explain the effects of adding Cr, Ni and W on the properties of steels.
9. Write brief notes on the following:
 - a) Recovery vs Recrystallization
 - b) Jominy end-quench hardenability test

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.