

- Q.5 The product of cupola is :
- a) Pig Iron b) Cast Iron
c) Steel d) None of above
- Q.6 The objective of annealing is.
- a) To soften the metal
b) To refine grain structure
c) To relieve internal stresses
d) All of above

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Name any basic material used in the production of pig iron.
- Q.8 Define ferrous metal.
- Q.9 Define weldability.
- Q.10 Name any two types of crystal defect.
- Q.11 Define bio material.
- Q.12 Name different types of thermosetting plastic.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 What are semi-conducting Material? What are its different types. Explain.

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- Q.14 Derive an expression for the atomic radius of face centered cubic structure.
- Q.15 What are surface defect explain its types.
- Q.16 Draw and explain cooling curve of a pure metal.
- Q.17 Explain different types of cast iron in details.
- Q.18 Explain different aluminium alloy in detail.
- Q.19 State and explain level rule.
- Q.20 What is heat treatment? What are its purpose.
- Q.21 Explain T.T.T. diagram.
- Q.22 Explain different types of ceramics.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Write a note on holding tempering, annealing and Surface Hardening.
- Q.24 Explain the construction of thermal equilibrium diagram.
- Q.25 Explain in detail Iron-Carbon Equilibrium diagram.

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