

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - II MECHANICAL : WINTER- 2022
SUBJECT : CHEMISTRY OF ENGINEERING MATERIALS

Day : Friday

Time : 10:00 AM-01:00 PM

Date : 25-11-2022

W-24065-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram wherever **NECESSARY**.
- 4) Assume suitable data if necessary.

Q.1 What are imperfections in a crystal? Explain point defect, line defect and screw dislocation with suitable diagram. [10]

OR

Q.1 Explain allotropic and polymorphism of metals. Give the note on solid solution formation. [10]

Q.2 What is magnetic separation method and froth floatation process? Explain with suitable diagram. [10]

OR

Q.2 Explain various chemical methods used for the concentration of ores with suitable diagram. [10]

Q.3 What are metallic materials? What are alloys? Give the classification of alloys. [10]

OR

Q.3 With suitable diagram explain Blast Furnace process used in steel making. [10]

Q.4 What are biopolymers? Give its applications in detail. [10]

OR

Q.4 Give the synthesis, properties and applications of; [10]
a) Phenol formaldehyde resin
b) Epoxy resins

Q.5 What are Fibre-Reinforced polymer composites? What are particle reinforcing composites? Give applications and limitations of composite materials. [10]

OR

Q.5 What are Fiber-Reinforced plastic composites? Explain Glass-Reinforced plastics. What are carbon fibers? [10]

Q.6 What is corrosion? Explain any four types of corrosion with suitable diagram. [10]

OR

Q.6 Explain the term hydrogen embrittlement and electroless plating. Give advantages of electroless plating. [10]

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