

I B. Tech I Semester Supplementary Examinations, August/September - 2022**ENGINEERING CHEMISTRY**

(Common to AME, Min E., PE)

Time: 3 hours**Max. Marks: 70****Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks****UNIT-I**

1. a) How is Bakelite prepared? Mention its applications. (7M)
b) Explain how plastics are prepared by blown film moulding technique. (7M)

Or

2. a) Explain the importance of biomedical polymers. (7M)
b) What are elastomers? Discuss preparation and applications of Thiokol. (7M)

UNIT-II

3. a) Explain the working of hydrogen –oxygen fuel cell. Mention its applications. (7M)
b) Discuss electrochemical theory of corrosion. (7M)

Or

4. a) Write a note on special paints. (7M)
b) Discuss the construction of a glass electrode. (7M)

UNIT-III

5. a) Discuss the applications of graphene. (7M)
b) Explain manufacturing process of Portland cement (7M)

Or

6. a) Explain instrumentation of differential scanning calorimetry. (7M)
b) What is refractory? Discuss refractoriness under load. (7M)

UNIT-IV

7. a) Discuss Fischer Tropsch method for preparation of synthetic petrol. (7M)
b) Discuss (i) liquefied petroleum gas (ii) Biodiesel (7M)

Or

8. a) Discuss proximate analysis of coal sample. (7M)
b) Explain (i) petrol knocking (ii) cetane number (7M)

UNIT-V

9. a) Explain how caustic embrittlement is formed in boilers? How can it be minimized? (7M)
b) Discuss reverse osmosis method for desalination of brackish water. (7M)

Or

10. a) Explain priming and foaming? Mention how they can be removed from boilers. (7M)
b) Explain zeolite process for softening of hard water. (7M)

