20CS102/20EC103/20EI103/20IT102
(CY01)

Hall Ticket Number:

4	2	0	A	C	S	5	1	0

I/IV B.Tech (Regular) DEGREE EXAMINATION

July, 2021
First Semester
Time: Three Hours

Common to CSE, ECE, EIE, and IT
Engineering Chemistry
Maximum: 70 Marks

Answer Question No.1 compulsorily. (1X14 = 14 Marks)
Answer ONE question from each unit. (4X14=56 Marks)

1 Answer all questions (1X14=14 Marks)

a) Summarize about Scales?
b) Classify the Priming?
c) Illustrate the Temporary Hardness?
d) Summarize about EMF of the cell?
e) Illustrate the Galvanic Corrosion ?
f) Summarize the Electro Plating process?
g) Explain about CNG
h) Summarize the Octane Number?
i) Illustrate Net Calorific Value?
j) Classify different Plastics?
k) Show the chemical equation involved in the preparation of PVC?
l) Explain about Markowikoff's rule.
m) Summarize the Entropy.
n) Outline the difference between soft water and hard water?

UNIT I

2. a) Select the method used to Estimate Total hardness of the given water sample & Discuss the steps involved in it? 7M
   b) List out the points about Caustic Embrittlment? 7M

(OR)

3. a) Make use of neat diagram to explain Zeolite process? 7M
   b) Classify the methods used in the treatment of brackish water & Discuss about Electro dialysis? 7M

UNIT II

4. a) Derive Nernst equation and mention two applications. 7M
   b) Make use of a neat diagram to explain the differential aeration corrosion. 7M

(OR)

5. a) Make use of a neat diagram to explain the Electro plating of Gold? 7M
   b) List out the points about Cathodic Protection? 7M

UNIT III

6. a) Select the method used to Determine the Calorific value. Discuss its importance? 7M
   b) Make use of a neat diagram to explain the petroleum refining and mention its uses? 7M

(OR)

7. a) Classify Knocking and Anti-Knocking agents? 7M
   b) List out the uses of Bio-diesel and briefly explain their preparation? 7M

UNIT IV

8. a) List out the reactions involved in SN^1. 7M
   b) Select the Aspirin Drug and Discuss the steps involved in synthesis of Aspirin? 7M

(OR)

9. a) Classify Conducting Polymers? Discuss about Intrinsic Conducting Polymers with applications. 7M
   b) Distinguish between thermoplastic and thermosetting plastics. 7M