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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year II Semester Supplementary Examinations July-2021

ENGINEERING CHEMISTRY

(Common to AGE, CE, EEE & ME)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1 Define Corrosion. Discuss various factors influencing the rate of corrosion. 12M

OR

2 a Write a note on sacrificial anodic protection? 6M

b Discuss Hydrogen - Oxygen fuel cell. 6M

UNIT-II

3 What is the principle of EDTA method? Describe the estimation of hardness by EDTA method. 12M

OR

4 a Explain scale and Sludge formation in boilers. How are they removed? 6M

b What is Priming and Foaming? 6M

UNIT-III

5 Define Lubricant. Discuss the important functions of Lubricants. Explain the mechanism of Lubrication. 12M

OR

6 a Explain the manufacture of power alcohol. 6M

b Explain Bergius process for the manufacture of synthetic petrol. 6M

UNIT-IV

7 a Explain different types of Polymerization with suitable examples. 6M

b Write the preparation, properties and uses of Buna-S rubber and Nitrile rubber? 6M

OR

8 What are conducting polymers? How are they synthesized? Write important engineering applications? 12M

UNIT-V

9 Define Cement. Explain the manufacture of Portland Cement. 12M

OR

10 a What are the characteristics of a good refractory? 4M

b Explain the properties of thermal spalling, porosity, dimensional stability and thermal conductivity of the refractories. 8M

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