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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

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

ENGINEERING CHEMISTRY

(Common to CE, ME & AGE)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a What are the units to express hardness of water? 6M
b Explain about demineralization of brakish water by Electrodialysis. 6M

OR

- 2 a Explain about demineralization of brakish water by Reverse Osmosis 4M
b Explain in detail about Boiler corrosion. 8M

UNIT-II

- 3 a Define Electrode Potential. Derive the Nernst equation for a single electrode potential. 8M
b What is primary Battery? Write a note on Li battery (Primary Cell). 4M

OR

- 4 a What is electroplating? Explain electroplating of Nickel and copper? 8M
b What is Electrochemical cell? Give an example. 4M

UNIT-III

- 5 a Write the mechanism of Anionic addition polymerization. 6M
b Write the mechanism of Cationic addition polymerization. 6M

OR

- 6 a Describe the preparation, properties and uses of Bakelite. And PVC. 8M
b Distinguish between Thermoplastics and thermosetting plastics. 4M

UNIT-IV

- 7 a Discuss in detailed about properties of Refractories. 6M
b Write short notes on Flash and Fire point. 6M

OR

- 8 a Determine the viscosity of lubricating oil by Redwood Viscometer. 8M
b What is cement? How do you classify the cement? 4M

UNIT-V

- 9 a Explain principle, instrumentation and applications of Scanning Electron microscopy (SEM). 8M
b Write the Applications of Nano materials. 4M

OR

- 10 a Write a note on Micelle formation. 6M
b Write any method synthesis of colloids with suitable example. 6M

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