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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year I Semester Supplementary Examinations November-2021
ENGINEERING CHEMISTRY
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Explain in detail about Boiler corrosion. L2 8M
b What is priming and foaming? L1 4M

OR

- 2 a Describe the Zeolite or permutit process for softening of water. L3 7M
b Explain about demineralization of brackish water by Electrolysis. L2 5M

UNIT-II

- 3 a What is primary Battery? Write a note on Zinc-air battery L1 6M
b Define the importance of the Impressed Current Cathodic protection? L1 6M

OR

- 4 a What is secondary Battery? Write a note on Lithium Ion rechargeable cell. L1 6M
b What is Electrochemical cell? Give an example. L1 6M

UNIT-III

- 5 a Write the preparation, properties and application of Buna-S and Buna-N rubber. L2 8M
b Calculate the gross and net calorific values of coal having the following composition, Carbon = 85%, Hydrogen = 8%, Sulphur = 1%, nitrogen = 2%, Ash = 4%. Latent heat of steam = 587 cal/gm. L3 4M

OR

- 6 a Describe the preparation, properties and uses of Bakelite. L3 8M
b What are the fuels? Write their units? L1 4M

UNIT-IV

- 7 a Discuss the mechanism of different types of lubrication. L3 9M
b What is meant by composites? L1 3M

OR

- 8 a Write a note on Fiber reinforced materials. L1 7M
b Discuss in detailed about properties of Refractories. L1 5M

UNIT-V

- 9 a Explain the BET Equation. L2 6M
b What are the factors influencing Adsorption of gases on solids. L2 6M

OR

- 10 a Write a note on Micelle formation. L1 6M
b Write a note on fullerenes. L1 6M

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