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

B.Tech I Year I Semester Supplementary Examinations August-2021

ENGINEERING CHEMISTRY

(Common to ECE, CSE & CSIT)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Write a note on Galvanic cell with suitable examples? 6M
b Explain in detail about lithium ion batteries? 6M

OR

- 2 a Define fuel cell. Explain the construction and uses of Methanol-Oxygen fuel cell. 8M
b What is electroplating? 4M

UNIT-II

- 3 a What is the principle of EDTA method? Describe the estimation of hardness by EDTA method. 8M
b Define temporary hardness and permanent hardness of water? 4M

OR

- 4 a Describe the Ion exchange process for demineralization of water? What are the advantages and disadvantages of ion exchange process? 8M
b What are different types of impurities present in water? 4M

UNIT-III

- 5 a Write a note on synthetic petrol by Fischer-Tropsch process. 6M
b Write a note on Producer gas & Water gas. 6M

OR

- 6 a Define Octane Number and Knocking? 4M
b Discuss about Cetane number and Write short notes on Flash and Fire point. 8M

UNIT-IV

- 7 a Distinguish between Thermoplastics and thermosetting plastics? 6M
b Explain the mechanism of Free radical addition polymerization. 6M

OR

- 8 a What is polymer? Discuss the Preparation, Properties and uses of Teflon? 6M
b Discuss the preparation and uses of Bakelite. 6M

UNIT-V

- 9 a Explain detailed about manufacture of Portland Cement? 8M
b What is meant by setting and hardening of cement? 4M

OR

- 10 a Discuss about Super conductors and their applications? 8M
b Write a short note on properties of carbon nano tubes and Fullerenes. 4M

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