

Q.P. Code: **16HS604**

R16

Reg.No:

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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year II Semester(R16) Supplementary Examinations December 2018
ENGINEERING CHEMISTRY
(Common to EEE, ME, AGE & CE)**

Time: **3 hours**

Max. Marks: **60**

(Answer all Five Units **5 X 12 = 60** Marks)

UNIT-I

- 1 a. Explain in detail about Lithium ion batteries. 5M
b. Write a short note on Lead acid battery? 7M

OR

- 2 What is Corrosion? Discuss various factors influencing the rate of corrosion. 12M

UNIT-II

- 3 a. Explain the disadvantages of hard water. 2M
b. What is the principle of EDTA method? Describe the estimation of hardness by EDTA method. 10M

OR

- 4 a. Distinguish between hard water and soft water. 2M
b. Describe the Zeolite process for softening of water. What are the advantages and disadvantages of Zeolite process? 10M

UNIT-III

- 5 a. Define Calorific value. 2M
b. Describe the method employed for the refining of petroleum with a neat sketch. 10M

OR

- 6 a. Explain the manufacture, advantages and disadvantages of power alcohol. 6M
b. Explain Bergius process for the manufacture of synthetic petrol. 6M

UNIT-IV

- 7 a. Explain Inorganic polymers with an example. 2M
b. Explain different types of Polymerization process with suitable examples. 10M

OR

- 8 a. Explain the preparation and uses of Bakelite. 5M
b. What are conducting polymers? How are they synthesized? Write its engineering applications? 7M

UNIT-V

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

OR

- 10 a. What are the characteristics of a good refractory? 3M
b. Explain the properties of thermal spalling, porosity, dimensional stability and thermal conductivity of the refractories. 9M

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