

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

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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year I Semester Supplementary Examinations December 2018
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. Define fuel cell. Explain the construction, uses and disadvantages of Methanol-Oxygen fuel cell. 12M

OR

2 a. Define Corrosion. 2M
b. Discuss in detail about electrochemical or wet corrosion. 10M

UNIT-II

3 a. Explain Ion exchange process. Give its regeneration process and write the advantages and disadvantages? 12M

OR

4 a. What is Calgon conditioning? 2M
b. Give a brief account on boiler troubles. 10M

UNIT-III

5 a. Write a note on synthetic petrol by Fischer-Tropsch process? 7M
b. Write a short note on Flash and Fire point? 5M

OR

6 a. Describe the method employed for the refining of petroleum with a neat sketch. 12M

UNIT-IV

7 a. What is a polymer? 2M
b. Explain the processing of natural rubber, vulcanization and compounding of rubber. 10M

OR

8 a. Distinguish between Thermoplastics and thermosetting plastics. 6M
b. Write the preparation, properties and uses of Buna-S rubber and Buna-N rubber? 6M

UNIT-V

9 a. What are Refractories? Explain the classification, properties and failures of Refractories. 12M

OR

10 a. Explain in detail about setting and hardening of Portland cement. 5M
b. Write a short note on properties and applications of Fullerenes and carbon nanotubes? 7M

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