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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**B.Tech I Year II Semester Regular Examinations October-2020****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 specifications of the drinking water BIS and WHO Standards? **6M**
b Describe the Zeolite or permutit process for softening of water. **6M**

OR

- 2 a Describe the estimation of hardness by EDTA method. **8M**
b Define Sludge and Scale. **4M**

UNIT-II

- 3 a Explain the Construction and working of Lead acid battery. **8M**
b Describe the Construction and Working of Methanol – Oxygen Fuel cell. **4M**

OR

- 4 a Discuss in detail about chemical or dry corrosion. **8M**
b What is Differential Aeration cell corrosion? Give the suitable Example. **4M**

UNIT-III

- 5 a Write the mechanism of Free radical addition polymerization. **6M**
b Write the mechanism of Co-ordination or Ziegler-Natta polymerization. **6M**

OR

- 6 a Explain the analysis of Coal (Proximate) With its Significance. **6M**
b Write a note on Octane value and Cetane value. **6M**

UNIT-IV

- 7 a Write short notes on Cloud and Pour point. **6M**
b Explain in detail about setting and hardening of Portland cement. **6M**

OR

- 8 a Explain in detailed about manufacture of Portland Cement. **8M**
b What are the properties of composite material? **4M**

UNIT-V

- 9 a Discuss the principle, instrumentation and applications of Transmission electron microscopy (TEM). **8M**
b Write a brief note on Applications of Colloids. **4M**

OR

- 10 a Explain principle, instrumentation and applications X-ray diffraction. **8M**
b What are the factors influencing Adsorption of gases on solids. **4M**

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