

(DE 104)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of First Year)

Paper - IV : Chemistry

Time : 3 Hours

Maximum Marks : 75

Answer question No. 1 compulsory

(15 × 1 = 15)

Answer ONE question from each unit

(4 × 15 = 60)

- 1) a) Coagulation.
- b) Sterilization.
- c) Sludge.
- d) Semi conductor.
- e) Metallic bonding.
- f) Monomer.
- g) Plastics
- h) Teflon
- i) Poly urethane Rubber
- j) Battery
- k) Nernst equation
- l) Corrosion
- m) Cathodic protection
- n) Sacrificial anode
- o) Iron Sulphide

Unit – I

- 2) a) What is hardness? How do you express hardness?
b) Explain the estimation of hardness of water by EDTA method?

OR

- 3) a) Explain briefly about lime – soda process?
b) Write a short notes on Boiler corrosion?

Unit – II

- 4) a) Derive the Bragg's equation?
b) Write a short notes on Semi-Conductors and Insulators?

OR

- 5) Explain briefly about the mechanisms of free-radical and Anionic chain polymerization?

Unit – III

- 6) a) Explain the processing and vulcanization of natural Rubber?
b) Buna – N

OR

- 7) Explain the following batteries :

- a) Zinc – carbon battery
b) Nickel – cadmium battery
c) Modern lithium batteries

Unit – IV

- 8) a) What is corrosion? Explain briefly about electro chemical theory of corrosion?
b) Electroplating

OR

- 9) a) Galvanic Corrosion
b) Pitting Corrosion
c) Thermo galvanic Corrosion
d) Cesium – Lithium – Ferric chloride

