

Code: CE1T3, CS1T3, EC1T4, IT1T3

**I B. Tech - I Semester – Regular/Supplementary Examinations
November 2018**

**ENGINEERING CHEMISTRY
(Common for CE, CSE, ECE & IT)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1.

- a) Distinguish between Carbonated Non Carbonate hardness of water.
- b) Why di-sodium salt of EDT A is used instead of EDTA in the estimation of hardness of water in EDTA method and also why the buffer is used?
- c) Write the structure of Bakelite.
- d) Write about the significance of Economy in the principle of green chemistry.
- e) Write the structure of C60 Fullerene.
- f) Write the significance of Pilling-Bedworth rule.
- g) Write the applications of galvanization and tinning.
- h) What is the advantage of super conductor give one example.
- i) What is greenhouse effect? Name the greenhouse gases.
- j) Write two applications of LCD
- k) Write two properties of Nano materials.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. How is hardness of water removed by

a) Ion Exchange process

b) Zeolite process and write the reactions involved ?

16 M

3. a) Write the mechanism of Ionic Polymerization.

8 M

b) Write the preparation, properties and uses of Bakelite

8 M

4. Write briefly

a) Super critical fluid extraction method and

b) Micro wave induced method in detail with figures.

16 M

5. a) What is corrosion? Describe galvanic and differential aeration corrosion with diagrams and examples.

8 M

b) Explain sacrificial anodic protection and

impressed current cathodic protection. With diagrams and advantages.

8 M

6. a) Write definition of Semiconductors and explain types of Semiconductors. 8 M
- b) Explain greenhouse concepts in detail. 8 M