

B.Tech I Year (R13) Supplementary Examinations December 2017

ENGINEERING CHEMISTRY

(Common to all branches)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

1 Answer the following: (10 X 02 = 20 Marks)

- (a) Define corrosion. What are the factors affecting the corrosion?
- (b) What are fuel cells? Give two examples.
- (c) Distinguish thermosetting and thermoplastics.
- (d) Give any two important applications of conducting polymers.
- (e) Write any four good characteristics of a fuel.
- (f) Write any two merits and demerits of power alcohol
- (g) Write any four important properties of refractory materials.
- (h) Define super conductivity. Give examples for super conducting materials.
- (i) Write notes on carbonate conditioning of water.
- (j) Define scale and sludge.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 Define rechargeable batteries. Describe Lead-acid batteries with neat sketch.

OR

3 Give brief note on electroplating, electro less plating and sacrificial anodic protection.

UNIT – II

4 Define and explain condensation polymerization method by taking suitable example.

OR

5 Give brief note on Bakelite and Silicones.

UNIT – III

6 What is metallurgical coke? Explain manufacturing of metallurgical coke by Otto Hoffmann's by product process.

OR

7 What is flue gas? Explain analysis of flue gas by Orsat's apparatus.

UNIT – IV

8 Explain the process of setting and hardening of cement.

OR

9 Write the importance of lubricants and explain any four important properties.

UNIT – V

10 Explain estimation of hardness by EDTA method in detail.

OR

11 Give brief note on Reverse Osmosis and Electro dialysis.
