

Code No: R13204

R13**SET-1****I B. Tech II Semester Supplementary Examinations, Nov/Dec - 2018****ENGINEERING CHEMISTRY**

(Com. to ECE, EEE, Bio-Tech, E Com E, Agri E)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**

PART -A

1. a) Explain the disadvantages of hard water. (4M)
- b) Discuss the effect of dilution on specific conductance and equivalent conductance. (4M)
- c) What are the effects caused to industries due to corrosion? (4M)
- d) Discuss the role of fillers and stabilizers in compounding of plastics. (4M)
- e) Explain, why HCV value is always higher than LCV. (3M)
- f) Explain, how solar reflectors work. (3M)

PART -B

2. a) Explain thermosetting and thermoplastics with examples. (8M)
- b) Distinguish petrol knocking and diesel knocking. (8M)
3. a) Explain how ion exchange process is better than zeolite process. (8M)
- b) Explain how single electrode potential is determined by using standard hydrogen electrode. (8M)
4. a) How can you determine sulphours, nitrogen and carbon in coal? Discuss about their significance. (8M)
- b) Explain thermotropic and lyotropic liquid crystals. (8M)
5. a) Explain the mechanism of wet corrosion. (8M)
- b) Explain the various chemicals used and their reactions for disinfection process in treatment of portable water. (8M)
6. a) Explain the working of primary and secondary batteries with an example. (8M)
- b) What are elastomers? Give the preparation and uses of styrene butadiene. (8M)
7. a) Explain phase transfer method of green synthesis. (8M)
- b) Discuss about hot dipping and metal cladding. (8M)