

I B. Tech I Semester Supplementary Examinations, May/June - 2017**ENGINEERING CHEMISTRY**

(Com. to CE, ME, CHEM, AE, AME, BOT, MM, MET, PE, PCE)

Time: 3 hours

Max. Marks: 70

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- 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 **FOUR** Questions from **Part-B**
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PART -A

1. a) How FRPs are different compared to normal composite materials? (2M)
- b) What are reversible and irreversible cells? (2M)
- c) Explain pitting corrosion. (2M)
- d) Define superconductor. Give examples. (2M)
- e) What is meant by caustic embrittlement? (2M)
- f) Define aniline point. (2M)
- g) Write the applications of lubricants. (2M)

PART -B

2. a) What is polymerization? Explain the different types of polymerizations with examples. (8M)
- b) What are the advantages of vulcanized rubber? (6M)
3. a) What is meant by cracking? Explain any cracking process for synthesis of petrol. (8M)
- b) Differentiate petrol knocking and diesel knocking. (6M)
4. a) Discuss electrochemical theory of corrosion. (8M)
- b) Write notes on (i) sacrificial anodic corrosion (ii) standard hydrogen electrode (6M)
5. a) Explain any two methods of green synthesis. (8M)
- b) What are fullerenes? Mention the properties of fullerenes. (6M)
6. a) Write a note on sterilization of water. (8M)
- b) Explain hot and cold lime soda process for softening of hard water. (6M)
7. a) Explain the various processes involved in manufacture of cement. (8M)
- b) Write notes on electrical insulators. (6M)