

I B. Tech II Semester Supplementary Examinations, Nov/Dec - 2018**APPLIED CHEMISTRY**

(Com. to CSE, IT, EIE, ECE, ECom 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 **FOUR** Questions from **Part-B**

PART -A

1. a) What types of initiators are required in ionic and free radical addition polymerization? (2M)
- b) Why is catalytic cracking method better than thermal cracking? (2M)
- c) What are the disadvantages of dry cell? (2M)
- d) How are fullerenes important in medicinal field? (2M)
- e) Discuss the close packing of atoms in bcc. (2M)
- f) Explain the importance of biofuels. (2M)
- g) What are electrical insulators? Give examples of liquid insulators. (2M)

PART -B

2. a) What is meant by polymerization? Explain the importance of biodegradable polymers. (7M)
- b) Explain the preparation and uses of BUNA-N and Thiokol. (7M)
3. a) Explain any one process for preparation of synthetic petrol. (7M)
- b) What is knocking? Discuss petrol and diesel knocking. (7M)
4. a) What are electrochemical cells? Explain the working of calomel electrode. (7M)
- b) Explain how design and purity of metal minimize the corrosion. (7M)
5. a) Explain the various steps involved in sol-gel process. (7M)
- b) Discuss any ten principles of green chemistry. (7M)
6. a) Explain Hall effect and its applications. (7M)
- b) Discuss stoichiometric and controlled valency semiconductors. (7M)
7. a) Discuss wave and tidal power. (7M)
- b) Write notes on carbonate and phosphoric acid fuel cells. (7M)

