

I B. Tech II Semester Supplementary Examinations, Nov/Dec - 2017**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**
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PART -A

1. a) Which of the following synthetic rubber cannot be vulcanized: BUNA S, BUNA N, and Thiokol? Give reason. (2M)
- b) Write the formula for calculation of HCV and LCV of a coal sample. Write the units of calorific value. (2M)
- c) What is the difference between reversible and irreversible cells? (2M)
- d) What are multi-walled carbon nanotubes? (2M)
- e) What is the effect of pH and conducting medium on corrosion? (2M)
- f) What are spinels and inverse spinels? (2M)
- g) What is meant by R_4M_4 ? (2M)

PART -B

2. a) Explain (i) suspension polymerization (ii) preparation of polycarbonates. (7M)
- b) Discuss how fiber reinforced plastics can be used for engineering applications. (7M)
3. a) Explain any one method for preparation of synthetic petrol. (7M)
- b) Explain the preparation and advantages of power alcohol. (7M)
4. a) Explain differential aeration and waterline corrosion. (7M)
- b) Discuss the working of a Leclanche cell. Give its applications and limitations. (7M)
5. a) What are superconductors? Differentiate type-I and type-II superconductors. (7M)
- b) Explain aqueous phase method and supercritical method for green synthesis (7M)
6. a) Discuss the working of Xerox machine in chalcogen photo/semiconductor. (7M)
- b) Explain the structure of rock salt and Cscl. (7M)
7. a) Explain the working of wind energy. What are its limitations? (7M)
- b) Explain the construction and working of a fuel cell. (7M)

