

**I B. TECH II SEMESTER REGULAR EXAMINATIONS, SEPTEMBER - 2021**  
**APPLIED CHEMISTRY**  
**(COMMON TO ECE AND EEE)**

**Time : 3 Hours****Max. Marks : 70**

**Note : Answer ONE question from each unit (5 × 14 = 70 Marks)**  
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UNIT-I

1. a) What is Rubber? Give preparation and uses of Buna-S & Polyurethane. [7M]  
b) Discuss about fibre reinforced plastics and give its constituents. [7M]

(OR)

2. a) Explain about biodegradable polymers with suitable examples. [7M]  
b) Give applications of Polymer composite materials. [3M]  
c) What are conducting polymers? Give one example. [4M]

UNIT-II

3. a) Define single electrode potential. Discuss the construction and working of standard hydrogen electrode. [7M]  
b) Describe the construction and working of Li ion battery. [7M]

(OR)

4. a) Outline about differential aeration corrosion and stress corrosion. [7M]  
b) Explain about electroplating and electroless plating. [7M]

UNIT-III

5. a) Discuss briefly distillation and zone refining methods. [7M]  
b) What are liquid crystals? Mention their applications [7M]

(OR)

6. a) Justify characterization of Nano materials by BET & SEM methods. [7M]  
b) Differentiate Type-1 and Type-2 Super conductors. [7M]

UNIT-IV

7. a) Explain about Atom Economy with suitable examples. [7M]  
b) Discuss on Waste Management. [4M]  
c) Explain about Green solvents. [3M]

(OR)

8. a) Write functioning of an autonomous light -powered molecular motors, natural molecular motors. [7M]  
b) What is the role of supramolecular chemistry in technology? Discuss it. [7M]

UNIT-V

9. a) What is chemical shift? How it is useful in finding various class of organic compounds. [7M]  
b) Analyze the importance of Finger Print and functional group region in determining functional groups. [7M]

(OR)

10. a) Discuss about conversion of geothermal energy into electrical energy with advantages. [7M]  
b) What are the advantages of organic photovoltaic cell and OTEC. [7M]

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