

Code No.: R22CH202BS

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

I-B.TECH-II-Semester End Examinations (Regular) - September- 2023

ENGINEERING CHEMISTRY
(Common for CSC, CSD, CSM)

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(10 Marks)

1. a) What is hardness of water? [1M]
- b) What is ozonization? [1M]
- c) Define calorific value. [1M]
- d) Give composition of LPG. [1M]
- e) Outline the two applications of batteries. [1M]
- f) Illustrate the standard electrode potential of metal. [1M]
- g) What is meant by base metal? [1M]
- h) List out the two disadvantages of corrosion. [1M]
- i) Define polymerization. [1M]
- j) Write the monomer of natural rubber. [1M]

PART-B

(50 Marks)

2. What are boiler troubles? Explain scales, sludges and caustic embrittlement. [10M]
- OR**
3. Write a brief note on Ion-exchange process of water. [10M]
4. Discuss Fischer's tropshs method. [10M]
- OR**
5. Explain ultimate analysis of coal? Give its significance. [10M]
6. Explain construction, working and applications of H₂-O₂ fuel cell. [10M]
- OR**
7. Write a note on solar cells with applications. [10M]
8. Illustrate pitting, galvanic and water line corrosion. [10M]
- OR**
9. Outline the various factors affecting rate of corrosion. [10M]
10. Explain free radical addition mechanism with example. [10M]
- OR**
11. What are conducting polymers? Discuss the mechanism of conduction in trans polyacetylene. [10M]
