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Question Paper Code: 41005

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

First Semester

Computer Science and Engineering

14UCY105 - APPLIED CHEMISTRY

(Common to EEE, ECE, EIE, ICE and IT)

(Regulation 2014)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. What are reversible and irreversible cells? How do they differ?
2. Mention the applications of Nernst equation.
3. State Grothus-Draper law of photochemistry.
4. Write a note on chemiluminescence.
5. During electroplating, pH of bath is strictly maintained. Give reasons.
6. What are the conditions for wet corrosion to take place?
7. "Sub-dividing the solid adsorbent increases the adsorption". Justify.
8. What is activated carbon? Give its significance.
9. Define the terms: Bathochromic shift and Hypsochromic shift.
10. Mention any two applications of UV-Visible spectroscopy.
11. Distinguish between electrolytic and electrochemical cells.
12. What are reversible and irreversible cells?

13. Define Grothus-Draper law of photochemistry.
14. What is photosensitization?
15. Iron is corroded faster than aluminium even though Fe is placed below Al in electrochemical series. Why?

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. What are reference electrodes and describe the construction of Standard Hydrogen Electrode(SHE). (10)
17. State and explain the laws of photochemistry in detail. (10)
18. Explain differential aeration corrosion with suitable example. (10)
19. Discuss the factors which influence adsorption of a gas on a solid. (10)
20. Discuss the various types of electronic transitions in detail. (10)