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B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013

INFORMATION TECHNOLOGY

Semester II

CH8202 CHEMISTRY FOR INFORMATION SCIENCE

(Regulation 2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Describe about preparation of pure germanium semiconductor by crystal growth method.
2. Write any two class of insulating materials and their applications
3. Differentiate thermoplastic polymers from thermo setting polymers
4. What are ionomers ? Give an example
5. Differentiate galvanic cell from electrolytic cell
6. Define the term electrode potential.
7. What are the types of batteries?
8. Describe about Nickel-cadmium Battery and its equation.
9. What is meant by decomposition potential?
10. List out the factors influencing electrodeposition.

Part – B (5 x 16 = 80 marks)

11. i) Discuss in detail about band theory of solids. (10)
ii) Explain about P-type and N-Type semiconductors. (6)
12. a) i) Discuss briefly about electroluminescent polymers and their LED applications (8)
ii) What are photoresist polymers explain with suitable block diagram and example (8)
(OR)
b) i) What photo conducting polymers explain their preparation and applications. (8)
ii) Write in detail about thermally stable polymers and what are requirements for thermally stable polymers (8)
13. a) i) Derive Nernst equation (8)
ii) Explain the measurement of electrode potential (8)
(OR)
b) i) How the pH of solution can be determined by glass electrode? (10)

14. a) ii) Describe about calomel electrode with suitable diagram (6)
i) Draw the block diagram of PEMFC explain its cell reaction (10)
ii) Explain the cell reaction and construction of alkaline fuel cell (6)
(OR)
- b) i) Draw the block diagram of SOFC explain its cell reaction (10)
ii) Discuss in detail about Molten carbonate fuel cell (6)
15. a) i) Explain briefly about Printed Circuit Board Fabrication (8)
ii) Discuss in detail about electroforming and its applications (8)
(OR)
- b) i) What is electrochemical etching? How does electrochemical etching occurs in copper. (10)
ii) What is meant by overvoltage what are factors affecting overvoltage (6)