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B.E /B.Tech (Full Time) DEGREE EXAMINATIONS APRIL /MAY 2014
Semester II
CH 8202 – Chemistry For Information science
(Regulation 2012)

Duration : 3 Hours

Max. Mark: 100

Answer ALL Questions
Part – A (10 X 2 = 20 Mark)

1. How fuel cells are classified based on temperature of operation?
Mention merits of fuel cell.
2. Define the following.
1. Electroforming 2. Electrochemical machining
3. What are fire retardant polymers? Give examples.
4. Calculate the EMF of a Daniel cell. [Standard electrode Potential of Zn (-0.76v) and Cu (0.34v)]
5. Mention the various types of electrodes with examples.
6. Compare the differences between the thermo-plastic and thermosetting plastics.
7. How are batteries classified? Give examples.
8. What are the steps involved in the surface preparation of electroplating?
9. How to minimize the polarization of electrodes in electroplating process ?
10. What are optical fibers? Mention its importance.

Part – B (5 X 16 = 80 Mark)

11. a Briefly explain the basic concept of origin of electrode potential with Neat diagram. (8)
b Discuss the ion-selective electrodes its types and its application. (8)
12. a(i) What are chalcogen photo and semiconductors? Describe the various stages involved in xerography process with neat diagram. (8)
(ii) Explain n- and p-type intrinsic semi conductor and its conduction (8)

process.

OR

- b(i) Give a brief account of the following (8)
1. Superconductor 2. fullerene
- (ii) Discuss the salient features of band theory of solids and its application to solids. (8)
- 13 a (i) Explain the basic construction and working of LCD cell with neat Diagram. Mention some examples of liquid crystal polymers. (8)
- (ii) Give a brief account of the following (8)
1. Electrically conducting polymer 2. Photo conducting polymer
- OR
- b (i) Explain the preparation, properties and application of phenolic resin. (8)
- (ii) Write notes on the following specialty polymers. (8)
1. Ferroelectric polymer 2. Poly electrolytes
- 14.a (i) Discuss the important characteristics of battery which are specifically designed and constructed? (8)
- (ii) Give a brief account of principle, construction and application of solar cells. (8)
- OR
- b (i) Explain the construction, cell reactions, advantages and application of Ni - Cd rechargeable cell. (8)
- (ii) How are rechargeable lithium batteries are classified? Describe the construction and working of lithium - ion cells (8)
- 15.a (i). Briefly explain the preparation of electro less plating of a printed circuit board (PCB). (8)
- (ii) What is throwing power? How it is experimentally determined using Haring blum cell? Give its significance. (8)
- OR
- b (i) Write the principle and mechanism of electroplating and mention the factors that influence the nature of electrodeposits. (8)
- (ii) Explain the principle of electroless plating and its advantages. How electroless plating of Nickel is done? (8)