

6/5/19  
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B.E /B.Tech (Full Time) END SEMESTER EXAMINATIONS, APRIL/MAY 2019

(COMMON TO COMPUTER SCIENCE AND INFORMATION TECHNOLOGY)

Second Semester

CH 8202 – CHEMISTRY FOR INFORMATION SCIENCE

(Regulation 2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART – A (10 x 2 = 20 Marks)

1. Define n-type semiconductor.
2. List the classification of insulating materials based on physical state.
3. What are photo-conducting polymers? Write any two of their uses.
4. What is the important requirement of photoresists?
5. Define electrochemical cell.
6. What are ion selective electrodes? Give examples.
7. How are batteries classified?
8. List any four disadvantages of nuclear energy.
9. Write the importance of metal finishing technique.
10. What is an electrolytic cell?



Part – B (5 x 16 = 80 Marks)  
(Question No.11 is Compulsory)

11. (i) Explain the electrical properties of solids based on band theory. (8)  
(ii) Discuss the preparation of pure germanium by fractional distillation method. (8)
12. a) (i) How are flame retardant properties imparted to polymers? How do the flame retardants function? (8)  
(ii) What are ionomers? What are their characteristic features? (8)

(OR)

- b) (i) Distinguish between thermoplastic and thermosetting resins. (8)  
(ii) How is epoxy resin prepared? What are their uses? (8)

13. a) (i) Derive Nernst equation for EMF of a cell. (8)  
(ii) Describe the construction and cell reactions in a Daniel cell. (8)

(OR)

- b) (i) Describe a glass electrode. How can it be used for determining the pH of a solution? (8)  
(ii) Explain the construction and working of a concentration cell. (8)

14. a) (i) Describe the construction and working of nickel-cadmium battery along with the relevant reactions. (8)  
(ii) What are fuel cells? Write short notes on alkaline fuel cells and solid oxide fuel cells. (8)

(OR)

- b) (i) Explain the design and working of solar cells. (8)  
(ii) How is hydropower generated? What are the advantages and disadvantages of hydropower? (8)

15. a) (i) Describe the preparation of printed circuit boards (PCBs). (8)  
(ii) What is overvoltage? Explain the factors affecting overvoltage. (8)

(OR)

- b) (i) Discuss the various factors influencing electrodeposition technique. (8)  
(ii) What is electroplating? Describe the electroplating of copper. (8)

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