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B.E / B.Tech (Full Time) DEGREE EXAMINATIONS, APRIL / MAY - 2011

SEMESTER II

CY 183 – CHEMISTRY – II

(For Electrical and Electronics Engineering)

(Regulation -2004)

Time: 3 Hrs

Max.Mark: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Mark)

1. State and explain Grothus-Draper law.
2. What is chemical actinometer?
3. Distinguish between polymer blend and polymer alloy.
4. How is polycarbonate prepared?
5. What is Pilling-Bedworth rule?
6. What is galvanic corrosion?
7. Distinguish between primary and secondary battery
8. What is the principle of voltametry?
9. What is ABS plastic? Mention any two application.
10. What are the advantages of rubber vulcanisation?

Part – B (5 X 16 = 80 Mark)

- 11 (i) What is Dosimeter? Briefly describe Frickel dosimeter and the chemical reactions involved in it. **8 marks**
- (ii) Explain the process of Chemiluminescence and thermoluminescence. with examples. **8 marks**
- 12 (a) Discuss the different types of conducting polymers with examples and their application. **16 marks**
- OR**
- (b) Explain the principle, structure and characteristics of optical fibre and its advantages. **16 marks**
- 13 a (i) Explain the principles of electro-chemical corrosion with suitable examples. **8 marks**
- a (ii) Give an account on the following **8 marks**
1. Stress corrosion.
 2. Pitting corrosion.
- OR**
- 13 b (i) Discuss the cathodic protection by sacrificial anode method **8 marks**
- b (ii) What are the different constituents of paints and explain their functions in detail. **8 marks**
- 14 a (i) Describe the construction of hydrogen-oxygen fuel cell. Mention its advantages. **8 marks**
- a (ii) Explain the essential parts of a nuclear reactor and their functions. **8 marks**
- OR**
- 14.b (i) Describe the construction of a dry cell with a neat diagram. Mention its disadvantage. **8 marks**
- b (ii) Explain the working principle of solar cell with a neat diagram. **8 marks**
- 15.(a) Discuss in detail the extraction and refining of aluminium from bauxite by Baeyer's process and by Hoopes's process. **16 marks**
- OR**
- 15.b (i) Explain the process of electrolytic refining of copper. **8 marks**
- b (ii) Write a note on electro-chemical machining process. Mention its advantages **8 marks**
