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

Branch: Printing

II- Semester

CY 8203 - Chemistry for Printing Technology

(Regulation 2012)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What is meant by reverse osmosis? How is it applied in the desalination of water?
2. Distinguish between BOD and COD.
3. What is the significant of pour point of a lubricant?
4. Define adhesives with suitable example.
5. Write note on acrylonitrile butadiene styrene.
6. Define composites with suitable examples.
7. What are the properties of alloys.
8. Define powder metallurgy and their uses?.
9. Distinguish between DTA and DSC.
10. Discuss the principle of column chromatography.

Part – B (5 x 16 = 80 marks)

11. i) What is paint? Discuss the constituents and their functions and mechanism of drying of an oil paint. (8)
ii) Describe the process of demineralization of water using ion-exchange resin and zeolite. (8)
12. a) i) Briefly explain the physical and chemical factors influencing adhesive action. (8)
ii) Explain the preparation and uses of phenol formaldehyde, epoxy resins and urea formaldehyde. (8)

OR

b) i) Write short note on properties of lime? How are stone ware and earthen ware manufactured? (8)

(ii) Write a note on the different types of glass and their uses. (8)

13. a) i) Give a brief note on properties and application of fiber reinforced composites. (8)

ii) Short note on specialty polymers and explain polyether sulfone and polyphenylene oxide. (8)

OR

b) (i) How are the polymers prepared? What are their uses? (a) polystyrene (b) polyurethane (8)

ii) Give a detailed account on the following polymers (a) polypropylene (b) polyethylene terephthalate (c) polycarbonate and (d) PVC. (8)

14. a) i) Give a brief account of non-ferrous alloy (8)

ii) Draw a phase diagram of iron-carbon system and explain the characteristic properties of steel. (8)

OR

b) i) Briefly explain the preparation of metal powders. (8)

ii) What is meant by mixed and blending. Explain the uses, advantages and limitation of powder metallurgy. (8)

15. a) i) Explain the working principle and instrumentation of HPLC. (8)

ii) Give a brief account of instrumentation of SEM and TEM. (8)

OR

b) i) Explain the principle and instrumentation of x-ray diffraction analysis. (8)

ii) Distinguish between STM and AFM. (8)
