

9/11/13

8

B.E/B.TECH (Full-Time) PRINTING, SEMESTER II
(CY 9162) Chemistry for Printing Technology (R 2008)

TIME 3 HOURS

ANSWER ALL QUESTIONS

MARKS 100

PART A (10X2=20)

1. Write the consequences of scale formation in boilers (2)
2. What are the constituents of paint? (2)
3. Define aniline point of a lubricant (2)
4. Write the preparation and uses of TEFLON (2)
5. Define Grothus Draper Law (2)
6. Distinguish between fluorescence and phosphorescence (2)
7. Describe the process of sintering with an example (2)
8. Define powder metallurgy with its significance (2)
9. Write the classification fuels with an example (2)
10. Distinguish between Octane and cetane number (2)

PART B (5X16=80)

11. Differentiate between internal and external treatment and explain the demineralization of water by ion-exchange process in detail (16)
- 12 (a). Write informative notes on the following
 - (i) Structure of graphite and molybdenum disulphide lubricants (8)
 - (ii) Differentiate between thermoplastics and thermosetting plastics (8)

(OR)

- 12 (b).
 - (i) What are phenolic adhesives? Distinguish the adhesive action between novalac and resole adhesives (8)
 - (ii) Write informative notes on vulcanization of rubber and epoxy adhesives (8)

13 (a). What are photochemical reactions? Discuss in detail the Jablonski diagram schematically representing radiative and non-radiative transitions (16)

(OR)

13 (b). (i) Define photo-sensitization and explain its application in photography. (8)

(ii) Write the photochemical decomposition of HI and HBR in details (8)

14 (a). (i) What are non-ferrous alloys? Give their properties and uses (8)

(ii) Explain any two methods of preparation of ferrous alloys with uses (8)

(OR)

14 (b). What is heat treatment of steel? explain the eight different types of heat treatment processes (16)

15 (a). How the analysis of coal is done by proximate and ultimate analysis (16)

(OR)

15 (b) Write notes on any two of the following

(i) Manufacture of synthetic petrol by Fischer-Tropsch process (8)

(ii) Otto-Hoffman method of production of metallurgical coke (8)

(iii) Analysis of flue gas by Orsat apparatus (8)