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B.E / B.Tech (Full-Time) DEGREE (ARREAR) EXAMINATIONS, APRIL / MAY 2014

**B.E. PRINTING
Semester II**

CY9162 CHEMISTRY FOR PRINTING TECHNOLOGY

(Regulation 2008)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Define caustic embrittlement with its significance (2)
2. What are the constituents of paint? (2)
3. Define pour point of a lubricant (2)
4. Write the preparation and uses of polyurethane adhesive (2)
5. Distinguish between fluorescence and phosphorescence (2)
6. Define the laws of photochemistry (2)
7. Define the term alloying along with its significance (2)
8. Define the term sintering with an example (2)
9. Write the classification of fuels giving examples (2)
10. Define Gross calorific value (2)

Part – B (5 x 16 = 80 marks)

11. With a neat diagram discuss the water softening process by ion-exchange process and Reverse Osmosis process in detail (16)
12. a) (i) Differentiate between thermoplastics and thermosetting plastics with example (8)
(ii) Write informative notes on preparation and uses of epoxy adhesives (8)
(OR)
b) (i) Discuss the structure and lubricating action of graphite and molybdenum disulphide lubricants (8)
(ii) Write informative notes on viscosity index and cloud point of lubricants (8)
13. a) (i) Define photo-sensitization and explain its application in photography. (8)
(ii) Write the photochemical decomposition of HI and HBR in details (8)
(OR)
b) Schematically explain the Jablonski diagram involving photo-physical and chemical processes (16)

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14. a) (i) Describe the process of compacting and sintering along with their uses (8)
(ii) Schematically explain any four methods of preparation metal powders (8)

(OR)

- b) What is heat treatment of steel? Explain the eight different types of heat treatment processes (16)

15. a) What are proximate and ultimate analyses? Explain them in detail along with significance (16)

(OR)

- b) Write informative notes on any two of the following

- (i) Fischer Tropsch Process (8)
(ii) Flue gas analysis by Orsat apparatus (8)
(ii) Manufacture of producer gas and water gas (8)