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**B.E /B.Tech (Full Time) DEGREE EXAMINATIONS April /May 2013
Semester II**

**CY 9162 – Chemistry for Printing Technology
(Regulation 2008)**

Duration : 3 Hours

Max. Mark: 100

Answer ALL Questions

Part – A (10 X 2 = 20 Mark)

1. How are fuels classified? Mention few examples.
2. Mention the importance of proximate and ultimate analysis.
3. What are the limitations of powder metallurgy ?
4. What are fuse alloys ?
5. What is chemical actinometer ?
6. Define photosensitization and quenching.
7. Mention the properties and application of TEFLON.
8. Compare the calcium, sodium and lithium based greases.
9. What is caustic embrittlement?
10. Compare priming and foaming process and how are they prevented?

Part – B (5 X 16 = 80 Mark)

- 11 (i) What are scales and sludge formation in boiler ? How they are prevented? (8)
(ii) Explain the mechanism of drying of an oil paint. (8)
12. a(i) Compare the thermosetting and thermoplastics resins with examples. (8)
(ii) Explain the determination of the following properties of lubricant oil (8)
1. Flash and fire point 2. Cloud and pour point
OR
b(i) Write note on the following solid lubricants (8)

(i) Graphite and (ii) Molybdenum sulphide

(ii) How are the physical and chemical factors influence adhesive action ? Explain. (8)

13 a (i) Discuss the classification and characteristics of photochemical reaction. (10)

(ii) Write a note on Fricke dosimeter. (6)

OR

b (i) What is fluorescence ? Explain the process with examples. (8)

(ii) State and explain the following (8)
1. Quantum efficiency 2. Stark- Einstein Law

14.a (i) Explain the different methods of preparation of metal/alloy powders. (10)

(ii) Give an account of sintering process. (6)

OR

b(i) Explain the Non-ferrous alloys and its properties and uses. (10)

(ii) Describe the low and high temperature process of annealing the metal. (6)

15.a (i) Discuss the Otto-Hoffman by product coke oven method of coke manufacture. Mention its advantages. (10)

(ii) Define gross and net calorific values .Explain its determination. (6)

OR

b(i) Explain the fluidized bed method of catalytic cracking of crude oil. (10)

(ii) Write note on coal varieties and its specifications. (6)