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B.E / B.Tech (Full - Time) DEGREE END SEMESTER EXAMINATIONS, NOV.- DEC. 2013
PRINTING TECHNOLOGY BRANCH,
FIFTH SEMESTER – (REGULATIONS 2008)

PT9301– PRINTING INKS

Time: 3 hrs

Max Marks: 100

Instructions:

1. Answer all questions.
2. All questions carry equal marks.

Part – A (10 × 2 = 20 Marks)

1. Write the characteristic properties of pigments (4 points)?
2. What is transparent and opaque pigments (give two examples for each)?
3. What is the application of disperse dyes in ink formulations?
4. What is varnish? Name any two types of varnishes used for book wrapper printing?
5. What type of beads are used for making printing inks?
6. Write the raw material compositions of newspaper inks?
7. How will you determine the ink adhesion characteristics of printed samples?(paper substrate).
8. What is the significant use of grind gauge in printing ink formulations?
9. What is the difference between thermo chromic and photo chromic inks?
10. What are the advantages of EB curable inks?

Part – B (5 × 16 = 80 Marks)

11. Explain the composition and advantages of UV inks and discuss the suitability of lamps for drying of printed samples.
12. (a) Explain the type of drying oils and their properties and applications in printing ink formulations.
(or)
(b) Classify the type of solvents used in liquid ink formulations and write their properties.
13. (a) Explain the following binders used for paste ink formulation with their properties in detail.
(i) Alkyds (ii) Rosin modified fumaric (iii) Phenolic
(or)
(b) Discuss the type of additives used in the formulation of paste inks and their significant use in ink formulations.
14. (a) Briefly discuss the manufacturing of paste inks using triple roll mill?
(or)
(b) What is tack? How are they measured? Explain the significance during multicolour printing .
15. (a) Briefly discuss the ink related problems with respect to offset printing?
(or)
(b) Explain the constituents of water based inks and the drying mechanisms in detail.