B.E./B.Tech. (Full time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2012

PRINTING TECHNOLOGY BRANCH

SEVENTH SEMESTER – (REGULATIONS 2008)

PT9403 – GRAVURE AND SCREEN PRINTING

Time : 3 hrs Max Mark:100

ANSWER ALL QUESTIONS

Part – A (10 x 2 = 20 Mark)

1. For publication gravure, which method of copper plating will you choose? Justify.
2. What is cylinder grading? Why is it used?
3. Compare between electromechanical engraving and laser engraving of gravure cylinders.
4. What are the advantages of Electrostatic Assist Impression system?
5. What are the factors that affect the ink film deposition in screen printing?
6. Why is it important to keep the squeegee blade sharpened?
7. How does abrading differ from degreasing?
8. What is a tunnel dryer?
9. What are the causes for orange peel effect in screen printing?
10. List the safe handling procedures for inks.

Part – B (5 x 16 = 80 Mark)

11. Explain about the types of fabrics for screen printing and the factors affecting fabric selection.

12. a. Describe in detail about the gravure cylinder preparation by direct transfer process

(or)

b. i) What are the elements in gravure cell specification? Discuss in detail about the factors affecting gravure cell volume in electromechanical engraving process. (8)

ii) Write a short note on dynamic balancing of gravure cylinders and its effect on print quality. (8)

13. a. i) With neat diagram, explain in detail about the conventional angle doctor blade system and its merits and demerits (8)

ii) Discuss in detail about pneumatic loading of doctor blade assembly. (8)

(or)

b. Explain in detail about deflection in gravure impression rollers and methods to compensate it with diagram.

14. a. Explain about the steps involved in preparation of photographic indirect stencils.

(or)

b. With neat sketches, explain the principle of working of the following graphic screen printing presses:

i) flatbed press (8)

ii) cylinder press (8)

15. a. Explain the causes and remedies for following print problems in gravure:

i)Abrasion ii)Scumming iii)Misting iv)Bleeding

(or)

b. Describe in detail about the waste disposal and environmental safeguards in gravure printing.