

B.E. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2011
PRINTING TECHNOLOGY BRANCH
SIXTH SEMESTER
PT382 – GRAVURE PRINTING
(REGULATIONS 2004)

31

Time: 3 hr

Max Mark: 100

Answer ALL Questions
Part – A (10 x 2 = 20 Mark)

1. What are the different variables of gravure well?
2. State the necessity of copper plating in gravure cylinder construction?
3. Define 'staging' and 'roll up'?
4. How is direct transfer method different from conventional method in gravure printing?
5. What is known as dry angle and wet angle in doctor blade positioning?
6. Why does the doctor blade oscillate in gravure printing machine?
7. List out the disadvantages of Stop-type impression setting system?
8. State the different methods used to convert 'roll to sheet' in gravure presses?
9. Define "snowflakes"
10. Why does the web break during print and state its remedial action?

Part – B (5 x 16 = 80 Mark)

11. (i) Discuss the broad product areas in gravure printing and list out the advantages and disadvantages of gravure process over other process. (6)
 (ii) List out and explain the different methods adopted to reuse the gravure cylinder (10)
12. (a) With neat diagram, explain the different steps involved in the preparation of image carrier for gravure process using diffusion etch method.
 (or)
 (b) (i) Explain with sketches, the methods that make use of computers in the preparation of image carrier in gravure process (12)
 (i) State the need to have screen exposure in conventional process and also discuss on the problems likely to occur if screen exposure is not done? (4)
13. (a) (i) With neat diagram explain the different parts of a doctor blade assembly and also explain the types of doctor blade wiping systems. (8)
 (ii) Discuss on the methods used to create desired pressure in the printing nip of the gravure process with neat diagram. (8)
 (or)
 (b) (i) List out the different types of inking system used in gravure process and explain with diagram any three of its type. (10)
 (ii) Explain with sketch the power transmission system in gravure process. (6)
14. (a) With neat sketches explain the parts of the gravure machine and also discuss the different press configuration used in gravure press.
 (or)
 (b) Discuss on 'modular gravure printing unit' and also list out and explain the various inline converting operations carried out in a gravure unit.
15. (a) Explain the procedure of waste disposal carried out in gravure unit and discuss about the environmental concerns in the gravure press.
 (or)
 (b) State the need for maintenance and explain the different types of maintenance to be done in the gravure press.