

B. PRINTING ENGG. PART-I EXAMINATION, 2008

(2nd Semester)

FLEXO AND GRAVURE

Time : Three hours

Full Marks : 100

Answer question no. 7 and any *two* from each group.

GROUP-A

1. (a) Why flexography is called aniline printing? 2
- (b) Write the basic principle of flexographic printing and briefly discuss the main parts of a flexographic printing unit. 2+8=10
- (c) Which types of substrates are suitable for flexographic printing? 3
- (d) What are the advantages of flexography? 5
2. (a) Draw a neat diagram showing the physical parts of a flexographic printing plate and explain each term. 6
- (b) How the flexographic plates are made by using rubber and sheet polymer? Make a distinction between them. 14
3. (a) Briefly state different designs of a flexographic press with supporting diagram and make a comparison among them. 9
- (b) Compare between the pyramid and the quadrangular cell structure of an anilox roll. 3
- (c) Distinguish between various types of flexographic inks stating their merits and demerits. 8

[Turn over

(2)

GROUP-B

4. (a) Which types of base materials and surface materials are used in gravure cylinders? 3+2=5
- (b) What are the causes and remedies of following imbalances in gravure cylinders?
- (i) Static Imbalance. 3
- (ii) Dynamic Imbalance. 3
- (c) What criteria must a film positive meet for gravure cylinder making? 3
- (d) Which substrates are generally suitable for gravure printing? 3
- (e) How the surface treatment is done on film surface in gravure printing? 3
5. In how many ways gravure cylinders are prepared? Describe each process in the light of their merits and demerits and also draw the diagrams of different opening and depth of cells. 2+18=20
6. (a) Mention the necessary features of a doctor's blade used in gravure printing. 4
- (b) How higher pressure of gravure impression roller affects the gravure printing? 3
- (c) Discuss briefly the factors which influence drying in a gravure printing unit. 6
- (d) Which properties a gravure ink must possess? 3
- (e) Mention various ingredients of gravure ink. 4

(3)

7. Write short notes on any *four* : 4×5=20
- (a) Ghosting and Adhesion in Flexography.
- (b) Strike through and Trapping in Flexography.
- (c) Streaking and colour strength in Gravure.
- (d) Crawling and drying in Gravure.
- (e) Pigment settlement and pin hole appearance in Gravure.
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