Ex/PRN/T 316/2017(S)

B. PRINTING ENGINEERING 3RD YR. 1ST SEM. SUPPLEMENTARY EXAMINATION, 2017

FLEXO AND GRAVURE

Time : Three hours | Full Marks : 100

Use Separate Answer-scripts for each Part.

PART - i

Answer ***question no. 4*** and any ***two*** from the rest.

1.a) Show the different features which make gravure a natural choice for package printing. 6

b) What criterions must a film positive meet for gravure cylinder making? 3

c) How the corrections are made on a gravure cylinder? 3

d) How the gravure cylinders are made ready for reuse? 4

e) Which types of base materials and surface materials are used in gravure cylinders? 2+2=4

2. a) How does the laser cutting process differ from electromechanical process of gravure engraving? Describe briefly. Also cite the merits of laser cutting process. 10+3=13

b) How the splicing is done in the gravure infeed unit? 7

3.a) Mention the necessary features of a doctor's blade used in gravure printing. How many types of doctor's blade profiles are available? 4+3=7

b) How does higher pressure of gravure impression roller affect print quality? 3

c) How does a drying system function in a gravure unit? 6

d) Mention various ingredients of gravure ink. 4

4. Write short notes on any *two*: 2x5=10

a) Colour strength and pinhole in gravure.

b) Cylinder wear and drying in gravure.

c) Streaking and bleeding in gravure.

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B.Printing Engineering 3rd year 1st Supplementary Examination, 2017
Flexo and Gravure Printing

Time: 3hours **Full Marks:** 50

Use different Answer script for Part II

PART-II

Answer any **two** of the following questions:

1. a) Give a workflow of flexography printing process? What are the problem occurred due to improper web tension?
   b) What are the types of cellulose film? Give each example of it.
   c) What are the various types of image carrier used in flexographic printing process? Briefly describe about solid photopolymer plate making process.
   [4+5+ (1+10)=20]
2. a) Describe the lamination method in Flexography Printing.
   b) What are the comparison between rubber plate and photopolymer plate?
   c) Why are the thin plates preferred in flexographic printing comparing to thick plates?
   d)Why will you prefer water based flexographic ink over solventbhased ink?
   [7+5+4+4=20]
3. Discuss about :
   a. Anilox roller
   b. Ghosting Image
   c. Etching process
   d. CI Press
   [5+5+5+5=20]
4. a) Discuss about the reason and remedies:
   i) Halo effect ii) Mottle iii) Screening
   b) Discuss about the general physical properties of flexographic ink. [12+8=20]

Answer any **two** of the following questions:

I.Name any two waxes used in flexographic ink. What is the utility of using wax in flexographic ink?

II. The choice of solvent is governed by number of factors-what are they?

III. What are the factors effect on viscosity in the flexography press? [2X5=10]