

BACHELOR OF PRINTING ENGINEERING EXAMINATION, 2009

(2nd Year-2nd Semester)

PRINTING SURFACE PREPARATION

Time: Three hours

Full Marks : 100

Answer Question No.1 from Group-A and any Two Questions from Group-B and any Two Questions from Group-C

Group-A

1. (a) What are the merits and demerits of the Brush Graining Process?
- (b) What is the base metal for offset plate?
- (c) What is the material used for forming the image areas of deep etch plate?
- (d) What is the material used for forming the image areas of egg-albumen plate?
- (e) What are the material used for forming the image and non-image areas of the waterless offset plate?
- (f) Why water is sprayed over the counter-etched plates just before application of coating?
- (g) What are the constituents of the coating solution used for egg-albumen plate making?
- (h) What are the constituents of the coating solution used for gum deep etch plate making?
- (i) What are the constituents of the regular developing solution used for the development of gum deep etch plate?
- (j) What is the purpose of the Sodium Silicate layer in the Presensitized plate?

4+1+1+1+2+3+2+2+2+2=20

Group-B

2. (a) What are the purposes of graining the plate used in Lithographic Printing Surface Preparation?
- (b) What are the factors which influence the mechanical graining of the lithographic plates?
- (c) What are the purposes of anodizing the lithographic plates? 5+10+5=20

[Turn over

3. (a) Why the pH of the gum arabic solution used in desensitizing of lithographic plate should be kept near about 3.0 for most effective result?

(b) What are the purposes of counter etching the base metal for lithoplate?

(c) What are the properties the gum arabic solution possess for which it is considered as a desensitizing solution for lithographic plate making?

(d) Discuss the effect of relative humidity and surface treatment on the coating thickness of bichromated egg-albumen and gum-deep-etch coatings used in lithography.

5+5+5+5=20

4. What are the factors which influence the sensitivity to light of the bichromated colloidal films used in lithographic plate making? Discuss in brief. 20

Group-C

5. (a) What are the merits and demerits of waterless offset process?

(b) What are the properties the Silicone Resin have for which it is used as imaging material for the non-image portions of the waterless offset plate?

(c) What do you mean by additive and subtractive pre-sensitized plate? Discuss in brief.

(d) What are the preferences of the platemaker and printer so far as plate grain is concerned? Discuss with reason.

(e) Discuss how the porosity of the grain surface can be increased. 5+4+4+4+3 =20

6. (a) Discuss with neat sketch the basic configuration of Negative working waterless offset plate.

(b) Discuss in brief, the Imaging and Developing of the Negative Working Waterless Offset Plate.

5+15=20

7. (a) What are the factors which affect the thickness of the bichromated colloidal coating on grained Al plate used in Lithographic Printing Surface Preparation? Discuss in brief.

(b) What are the advantages of the Deep etch plates over the surface plates used in Lithographic Printing Surface Preparation?

(c) Discuss in brief, how the plate grains are evaluated.

6+7+7=20
