

B.Printing Engineering Examination 2017

(Second Year Second Semester)

Printing Surface Preparation

Time: Three hours

Full Marks:100

Answer any Five questions

- 1.(a) Why Al is selected as base metal for image surface preparation of Offset Printing?
(b) Discuss in brief, the chemical graining and electrochemical graining of Al plate.
(c) Discuss in brief the Brush graining methods along with merits and demerits.
(d) What is Stop out in deep etch plate making ? 5+(3+3)+6+3=20
2. (a) What are the purposes of graining Al base plate?
(b) What are the purposes of anodizing the grained Al plate?
(c) How are the plate grains evaluated?
(d) What are the preferences of the platemakers and printers so far as plate grains are concerned? Discuss in brief. 5+4+6+5=20
3. (a) What are the factors which influence the mechanical graining of the lithographic plates. Discuss in brief.
(b) What are the advantages of the deep etch plates over the surface plates?
(c) What happens when one step additive development solution is rubbed on exposed diazo plate? 8+8+4=20
- 4.(a) What are the factors which affect the thickness of the bichromated colloid coating on grained Al plate used in lithographic surface preparation? Discuss in brief.
(b) What are the properties Silicone Resin have for which it is used as a material to form the non-image areas of the waterless offset plate?
(c) What is the constituent of the counter etching solution?
(d) What is the purpose of the sodium silicate layer in the presensitized offset plate?

(e) What are the basic constituent of the regular developing solution used in gum deep etch plate making?

(f) What are the constituent of the etching solution used in gum deep etch plate making? Discuss the functions of them.

$$7+4+2+2+2+3=20$$

5. (a) Discuss in brief the basic structure of the negative working waterless offset plate.

(b) Discuss in brief, the imaging and developing of the negative working waterless offset plate.

$$5+15=20$$

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

$$20$$

7. (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 lithographic plates?

(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?

$$5+5+5=20$$