

BACHELOR OF PRINTING ENGINEERING EXAMINATION 2019
(Second Year, Second Semester)
PRINTING SURFACE PREPARATION

Time: Three hours

Full Marks: 100

Answer any five questions

1. a) Why is Al selected as base metal for image surface preparation of Offset Process?
b) Discuss in brief the chemical graining and electrochemical graining.
c) Discuss in brief the brush graining along with merits and demerits.
d) What is Stop-out in deep etch plate making? 5+(3+3)+(3+3)+3=20
2. What are the factors which influence the sensitivity to light of the bichromated colloid films? Discuss in brief. 20
3. a) What are the purposes of graining?
b) What are the purposes of counter etching?
c) What are the factors which influence the mechanical graining? Discuss. 5+5+10=20
4. a) Why should the pH of the gum arabic solution used in desensitizing purpose of the Offset plate be kept near about 3.0 for most effective result?
b) What are the properties gum arabic possess for which it is considered as desensitizing solution for lithoplate?
c) What are the preferences of the plate-makers and printers so far as grain is concerned?
d) What are the merits and demerits of waterless offset process? 5+6+4+5=20
5. a) What are the properties Silicone resin have for which it is used as imaging material for the non-image areas of the Waterless Offset Plate?
b) What do you mean by Additive and Subtractive Pre-sensitized plate? Discuss.
c) Discuss in brief, how plate grains are evaluated.
d) What happens when One Step additive developing solution is rubbed on exposed diazo plate?
e) What are the functions of the transparent protective layer in Waterless Offset Plate? 4+4+7+3+2=20
6. a) What are the advantages of the gum deep etch plate over the PVA deep etch plate?
b) What are the advantages of the deep etch plates over the surface plates?
c) What is the composition of the brunaking solution used in Egg Albumen and Deep etch processes? Discuss its effect on coating thickness of bichromated colloid surface and deep-etch plates?
d) Why is alkaline developer used in positive working Presensitized plate?

$$3+7+(3+4)+3=20$$

7. 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.

$$5+15=20$$
