

BACHELOR OF PRINTING ENGINEERING EXAMINATION, 2010
(2nd Year - 1st Semester)

GRAPHIC REPRODUCTION

Time : Three hours

Full Marks : 100

Answer any *FIVE* questions.

- 1.a) "Simple lenses are not used in Graphic Reproduction" – Justify. 4
b) Discuss various defects in process lenses and show their remedies. 10
c) What do f-numbers printed on the lens body indicate? 2
d) How magnification factor affects exposure time? 4
- 2.a) Why chemical ripening is at all required in the manufacturing of dry gelatin halide emulsion? 2
b) Why doctoring is necessary in the manufacturing of dry gelatin halide emulsion? Explain it briefly. 1+5
c) Compare among functions of different layers of a black and white process film. 8
d) What do you mean by Gamma? Explain briefly. 4
- 3.a) How a Continuous-tone development solution works? 8
b) What is optical density? Describe the basic principle of a densitometer with supporting diagram. 2+6
c) How optical density of a negative image can be enhanced? 4
- 4.a) What are the basic requirements of a light source for Graphic Reproduction Camera? 3
b) Describe the different light sources used in Graphic Reproduction. 17

[Turn over

- 5.a) How 'Penumbra' helps the formation of dots of varying sizes in halftone images?
Show with supporting diagram. 7
- b) Why halftones are at all required in reproduction processes? 4
- c) How is the black printer negative prepared? 6
- d) What sort of special exposure is required in halftone preparation and why? 1+2
-
- 6.a) Compare between contact screen and glass crossline screen. 7
- b) Discuss the role of colour separation filters in colour separation photography. 7
- c) What will happen if
- i) lith emulsion is used for continuous tone work? 3
- ii) an orthochromatic emulsion is used for colour separation photography? 3
-
- 7.a) Make a comparison between direct and indirect method of colour separation with supporting block diagram. 10
- b) Explain why in colour reproduction methods colour correction is a necessity. Describe any one colour correction technique. 5+5
-
8. Write short notes on any *four* : 4x5=20
- a) Lens flare
 - b) Gelatin
 - c) Moire' pattern
 - d) Screen angle
 - e) Filter indices
-