

B.E. PRINTING ENGINEERING SECOND YEAR SECOND SEMESTER – 2022

GRAPHIC REPRODUCTION

Time : Three hours

Full Marks : 100

Answer from all the groups.

GROUP – A

- 1-a) Describe the basic principle of vertical process camera. 6
b) What are the merits of vertical process camera over contact printer? 4

GROUP – B

Answer any *two* questions.

- 2.a) Discuss various defects in process lenses and show their remedies. 10
b) What is lens flare? How is it eliminated? 2+3
- 3.a) Compare among functions of different layers of a black and white process film. 7
b) Why chemical ripening is at all required in the manufacturing of dry gelatin halide emulsion? 2
c) Why doctoring is necessary in the manufacturing of dry gelatin halide emulsion? Explain it briefly. 1+5
- 4.a) What are the basic ingredients of a continuous-tone developing solution? How these ingredients contribute to the effective working of the solution? 4+8
b) Why fixing is necessary in film processing? Explain briefly. 3

GROUP – C

- 5.a) Why density measurement is so important in graphic reproduction? 3
- b) Describe the role of colour filters and polarisation filters in a densitometer. 4+4
- c) What do the different parts of a characteristic curve of a film emulsion represent? Discuss in details. 9

GROUP – D

Answer any *two* questions.

- 6.a) Why halftones are at all required in reproduction processes? 5
- b) Describe the penumbral theory of halftone photography. 6
- c) Why Moire pattern is caused and how it can be eliminated? 3+3
- d) Reason why separate screen angles are used instead of the same angle for colour separation images? 3
- 7.a) "Contact screen is simpler and more versatile compared to glass crossline screen." Explain the statement. 7
- b) Why black printer negatives are required in colour reproduction in offset printing process and how is it prepared? 2+4
- c) Discuss the role of colour separation filters in colour separation photography. 7
- 8.a) Why colour correction is needed in colour reproduction methods? Describe any one colour correction technique. 5+5
- b) "Indirect method of colour separation films is qualitatively better than direct method of colour separation films." – Justify it with description of these methods along with flowchart. 10