



THE KENYA POLYTECHNIC
GRAPHIC ARTS DEPARTMENT
DIPLOMA IN PRINTING TECHNOLOGY
END OF YEAR I SUPPLEMENTARY EXAMINATIONS
JANUARY 2007
(MAIN EXAMINATIONS: NOVEMBER 2006 SERIES)
MACHINE PRINTING
3 HOURS

INSTRUCTIONS TO CANDIDATES:

Answer any FIVE questions.

All questions carry equal marks and the maximum marks for each part of a question are as shown.

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1. (a) Distinguish between the following methods of preparing printing surfaces:
 - (i) Engraving
 - (ii) Etching
 - (iii) Photomechanical(6 marks)
- (b) Describe TWO factors which determine the depth of images on a flexographic printing surface. (6 marks)
- (c) With the aid of a diagram explain the multi layer flexographic plate. (8 marks)
2. (a) Define a reverse image. (2 marks)
- (b) Explain TWO methods of obtaining the image in question 2(a) during lithographic surface preparation. (8 marks)
- (c) With the aid of an illustration explain how gum Arabic preserves a lithographic surface. (10 marks)
3. Discuss the structures of the following printing surfaces after preparation:
 - (i) Gravure
 - (ii) Screen

- (iii) Flexographic (iv) Lithographic (20 marks)
4. (a) With the aid of labeled diagrams, explain the following damping systems:
- (i) Flap water feed (ii) Brush feed (14 marks)
- (b) State TWO possible reasons for image blindness caused by the damping system. (6 marks)
5. (a) State TWO types of feeders found on a sheet fed press. (4 marks)
- (b) Describe how each of the feeders in question 5(a) works. (16 marks)
6. (a) Describe 'compressible lithographic blanket.' (10 marks)
- (b) Define 'dot gain'. (2 marks)
- (c) Explain FOUR causes of dot gain on press. (8 marks)
7. (a) Define the term 'graining'. (2 marks)
- (b) Explain any THREE reasons for graining a lithographic plate. (18 marks)
8. With the aid of a labeled diagram, explain how a conventional lithographic damping system works. (20 marks)