

Name: _____ Index No: _____

1411/311
INTRODUCTION TO PRINTING
TECHNOLOGY
June/July 2013
Time: 3 hours

Candidate's Signature: _____

Date: _____



THE KENYA NATIONAL EXAMINATIONS COUNCIL

PRINTING TECHNOLOGY CRAFT

INTRODUCTION TO PRINTING TECHNOLOGY

3 hours

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided above.

Sign and write the date of examination in the spaces provided above.

You should have a scientific calculator (Battery operated) for this examination.

This paper consists of **TWO** sections; **A** and **B**.

Answer **ALL** the questions from section **A** and any **FOUR** questions from section **B**.

Each question in section **A** carries **4** marks while each question in section **B** carries **15** marks.

Write your answers in the spaces provided in this question paper.

Candidates should answer the questions in English.

Section A

For Examiner's Use Only

Question	1	2	3	4	5	6	7	8	9	10	TOTAL
Marks											

Section B

Question	11	12	13	14	15	16	TOTAL
Marks							

GRAND
TOTAL

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This paper consists of 12 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (40 marks)

Answer ALL questions in this section.

1. Explain the principles of lithography and screen printing processes. (4 marks)
2. State any **four** organizations related to the printing industry. (4 marks)
3. Outline any **two** advantages of automatic film processing over manual method. (4 marks)
4. Describe any **two** main components used in manufacture of ink. (4 marks)
5. State any **four** mechanical power transmissions on the press. (4 marks)
6. Outline the reasons of varnishing printed stock. (4 marks)
7. Explain the **two** methods of eliminating static energy on the feeders. (4 marks)
8. State any **four** factors considered before folding a sheet. (4 marks)
9. Explain the following terms in print finishing:
 - (i) clenching;
 - (ii) stabbing.(4 marks)
10. (a) State **two** types of gears which transmit power through 90° on the press. (2 marks)
(b) Explain the purpose of using grease as a lubricant on the press. (2 marks)

SECTION B (60 marks)

Answer any FOUR questions in this section.

11. With the aid of a diagram, explain the principle of a **four** colour modular in-line press. (15 marks)
12. (a) State the effect of over-exposure to the following:
 - (i) a positive plate through a positive film.
 - (ii) a negative plate through a negative film.(4 marks)
- (b) List any **three** quality control aids used during plate exposure. (3 marks)
- (c) Outline the stages involved in automatic plate processing. (8 marks)

13. (a) State **five** qualities of a good continuous tone copy. (5 marks)
- (b) (i) Explain the characteristics measured in densitometry. (8 marks)
- (ii) State the angles at which cyan screen can be used in film production. (2 marks)
14. (a) Describe the following printing terminologies:
- (i) wrapped work;
- (ii) cover drawn on;
- (iii) lumbeck bound;
- (iv) self covers. (8 marks)
- (b) With the aid of a diagram explain any **two** parts of blocking foil. (7 marks)
15. (a) Outline the procedure of producing library bound books. (10 marks)
- (b) List **five** factors to be considered in library binding. (5 marks)
16. (a) State any **five** feeder adjustments for smooth paper flow. (5 marks)
- (b) Outline any **two** factors considered when adjusting the blowers and suckers of the feeder. (4 marks)
- (c) (i) Explain the difference between “off-set” and “set-off”. (4 marks)
- (ii) State the **two** possible causes of variations in temperature in an air-conditioned machine room. (2 marks)