

1801/104

TEXTILE MATERIAL KNOWLEDGE
AND FABRIC COLOURATION THEORY

June/July 2016

Time: 3 hours

HOD CLOTHING AND TEXTILE
RAMOGI INSTITUTE OF ADVANCED TECHNOLOGY
P. O. BOX 1738 - 40100, KISUMU
DATE:.....



THE KENYA NATIONAL EXAMINATIONS COUNCIL

CRAFT CERTIFICATE IN FASHION DESIGN AND GARMENT
MARKING TECHNOLOGY

MODULE I

TEXTILE MATERIAL KNOWLEDGE AND FABRIC COLOURATION THEORY

3 hours

INSTRUCTIONS TO CANDIDATES

This paper consists of SIX questions.

Answer question ONE which is compulsory and any other FOUR questions in the answer booklet provided.





Candidates should answer all questions in English.

This paper consists of 4 printed pages.

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

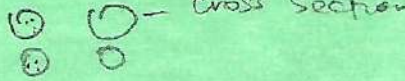
Question 1 is compulsory

1. (a) (i) State **six** methods of printing. (3 marks)
- (ii) Explain the term 'off register' as used in printing. (2 marks)
- (b) State the role of each of the following in a tie-and-dye process.
- (i) tong; (1 mark)
- (ii) mask. (1 mark)
- (c) Explain **four** factors to consider when selecting dyes. (8 marks)
- (d) Highlight **five** precautions to observe during the tie and dye process. (5 marks)
2. (a) Explain the term 'mixing' in fabrics, citing **three** of its objectives. (5 marks)
- (b) Highlight **four** limitations of pile fabrics. (4 marks)
- (c) Define the following cotton fabric production processes citing **two** objectives of each process.
- (i) combing; (3 marks)
- (ii) scouring; (3 marks)
- (iii) drafting. (3 marks)
- (d) State **two** categories of chemical tests done on fibres. (2 marks)
3. (a) Highlight **six** advantages of polyester fabrics. (6 marks)
- (b) Distinguish between each of the following:
- (i) Velvet and velveteen. (4 marks)
- (ii) Weft and warp knitting. (4 marks)
- (c) Outline **three** industrial uses of each of the following:
- (i) linen; (3 marks)
- (ii) silk. (3 marks)

4. (a) Highlight **two** objectives of each of the following fabric finishes:
- (i) glazing; - *Calendering* *manipulation in which starch is applied to fabric before passing it over hot steel rollers* (2 marks)
 - (ii) brushing; *removes short fibres from fabric surface & produces a smooth low pile surface* (2 marks)
 - (iii) bleaching; - *All natural colour & staining are removed* (2 marks)
- *reducing agents can either be oxidizing agents or reducing agents.*
 - (iv) starching. (2 marks)
- (b) Outline **four** sewing thread defects. (4 marks)
- (c) Describe the feeling test for each of the following fibres.
- (i) wool; (2 marks)
 - (ii) viscose; (2 marks)
 - (iii) linen. (2 marks)
- (d) State **two** advantages of elasticity in yarns. (2 marks)
5. (a) Explain **two** disadvantages of a cotton/polyester blend. (3 marks)
- (b) Outline **six** advantages of linen fabrics. (6 marks)
- (c) Explain **three** precautions to observe when storing viscose fabrics. (6 marks)
- (d) Identify the following care labels symbols.
- (i)  drying (1 mark)
 - (ii)  ironing (1 mark)
 - (iii)  washing (1 mark)
 - (iv)  dry cleaning in all solvents (2 mark)
6. (a) Illustrate the structure of each of the following weaves:
- (i) 3/3 basket (3 marks)
 - (ii) 2/1 left hand twill. (4 marks)

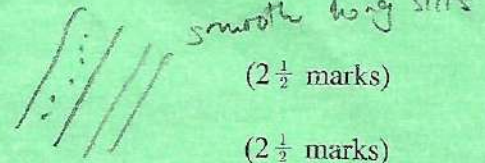
(b) Show the cross-sectional and the longitudinal microscopic views of each of the following fibres.

(i) nylon;



(2 ½ marks)

(ii) acetate.



(2 ½ marks)

(c) Highlight **three** disadvantages of static electricity in fabrics.

(3 marks)

(d) State **five** desirable qualities for a curtain fabric.

(5 marks)

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