

1801/104  
TEXTILE MATERIAL KNOWLEDGE  
AND FABRIC COLOURATION THEORY  
Oct./Nov. 2019  
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

CRAFT CERTIFICATE IN FASHION DESIGN AND GARMENT  
MAKING TECHNOLOGY

MODULE I

TEXTILE MATERIAL KNOWLEDGE AND FABRIC COLOURATION THEORY

3 hours

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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.*

*Maximum marks for each part of a question are as indicated.*

*Candidates should answer the questions in English.*

**This paper consists of 3 printed pages.**

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



1. (a) Illustrate a colour wheel to show the primary and secondary colours. (6 marks)
- (b) Describe each of the following techniques of tie-and-die:
- (i) binding; (2 marks)
- (ii) tritiking. (2 marks)
- (c) Explain **two** objectives of washing fabrics before dyeing. (4 marks)
- (d) Describe each of the following methods of printing:
- (i) discharge; (3 marks)
- (ii) block. (3 marks)
2. (a) Categorize each of the following fibre types either as 'cellulosic' or 'proteinic'.  
{Cashmere, Acetate, Silk, Flax, Fleece, Aplaca, Jute, Sisal} (8 marks)
- (b) Describe the feeling test for each of the following fabrics:
- (i) Viscose; (1 mark)
- (ii) Wool. (1 mark)
- (c) (i) Highlight **six** advantages of cotton fabrics. (6 marks)
- (ii) Outline **two** negative effects of sunlight on cotton fabrics. (2 marks)
- (iii) With the aid of an illustration, describe the longitudinal microscopic view of a cotton fibre. (2 marks)
3. (a) (i) Highlight **five** objectives of crimping polyester fibres during production. (5 marks)
- (ii) Explain the meaning of the term 'drawing-out' in polyester fibre production, citing two of its objectives. (4 marks)
- (b) Explain **three** safety precautions to observe when conducting a textile fibre burning test. (6 marks)
- (c) Outline **three** advantages and two disadvantages of satin fabrics. (5 marks)



4. (a) Describe the linen fibre production process. (10 marks)
- (b) Identify **five** end uses of felts. (5 marks)
- (c) Outline **five** limitations of wool fabrics. (5 marks)
5. (a) Highlight **two** objectives of each of the following cotton fabric production processes:
- (i) bleaching; (2 marks)
- (ii) sizing; (2 marks)
- (iii) scouring. (2 marks)
- (b) State **two** benefits of dry cleaning fabrics. (2 marks)
- (c) With the aid of illustrations, identify **four** care label information symbols for ironing. (6 marks)
- (d) Explain the functions of each of the following in a weaving operation.
- (i) Reed. (2 marks)
- (ii) Warp beam. (2 marks)
- (iii) Shuttle. (2 marks)
6. (a) (i) Describe the term 'spun thread'. (2 marks)
- (ii) Identify **four** sewing thread defects. (4 marks)
- (b) Describe each of the following fabric finishes:
- (i) brushing; (2 marks)
- (ii) antistatic; (2 marks)
- (iii) calendering; (2 marks)
- (iv) tentering. (2 marks)
- (c) Illustrate each of the following woven fabric structures.
- (i)  $\frac{2}{2}$  plain weave. (2 marks)
- (ii)  $\frac{2}{1}$  right hand twill. (4 marks)

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