

**1801/104**  
**TEXTILE MATERIAL KNOWLEDGE**  
**AND FABRIC COLOURATION THEORY**  
**June/July 2023**  
**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**

**INSTRUCTIONS TO CANDIDATES**

*This paper consists of SIX questions.*

*Answer **Question 1** (compulsory) and any other **FOUR** questions in the answer booklet provided.*

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

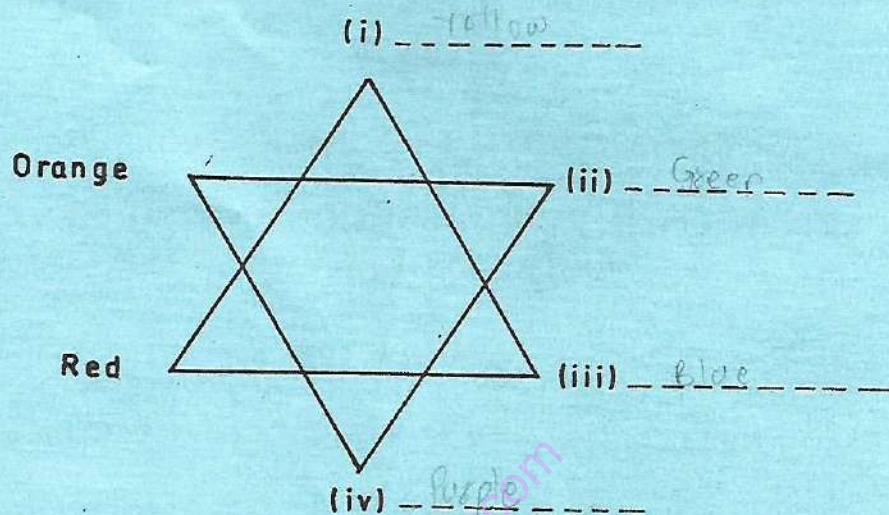
*Candidates should answer the questions in English.*

**This paper consists of 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.**



1. (a) Explain each of the following processes as used in fabric colouration:
- (i) heat-setting; (2 marks)
  - (ii) colour-toning. (2 marks)
- (b) Differentiate between 'synthetic' dyes and 'natural' dyes. (4 marks)
- (c) Fill-in the missing colours. (4 marks)



- (d) Identify **three** batik finishing processes. (3 marks)
- (e) Highlight **five** safety measures to observe when printing. (5 marks)
2. (a) Outline **four** processing stages in silk yarn production. (4 marks)
- (b) Explain each of the following types of fabric finishes:
- (i) stentering; (2 marks)
  - (ii) mercerizing; (2 marks)
  - (iii) cropping. (2 marks)
- (c) Explain **five** care measures for an acetate garment during use. (10 marks)



3. (a) (i) Distinguish between a 'filament' yarn and a 'spun' yarn. (4 marks)
- (ii) List **four** types of filament yarns. (4 marks)
- (b) Highlight **six** shortcomings of linen fabrics. (6 marks)
- (c) State **six** properties of knitted fabrics. (6 marks)
4. (a) Explain the importance of each of the following in fabrics:
- (i) selvedge; (2 marks)
- (ii) flexibility; (2 marks)
- (iii) thermoplasticity. (2 marks)
- (b) State **two** feeling tests for each of the following types of fabrics:
- (i) wool; (2 marks)
- (ii) linen; (2 marks)
- (iii) viscose; (2 marks)
- (iv) silk. (2 marks)
- (c) Identify the part of the plant from which each of the following types of fibres are obtained:
- (i) linen; (1 mark)
- (ii) cotton; (1 mark)
- (iii) sisal. (1 mark)
- (d) With the aid of an illustration, describe the longitudinal microscopic appearance of a cotton fibre. (3 marks)
5. (a) Explain **four** disadvantages of using water to clean fabrics. (8 marks)
- (b) Illustrate each of the following woven, fabric structures:
- (i)  $\frac{2}{2}$  basket weave; (3 marks)
- (ii)  $\frac{1}{2}$  left hand twill. (4 marks)
- (c) Identify **five** household uses of quilted fabrics. (5 marks)



6. (a) Define the following fabric construction terms:
- (i) warps; - constructing from in a horizontal way (2 marks)
  - (ii) wales; - (2 marks)
  - (iii) ground-yarn. (2 marks)
- (b) With the aid of an illustration, explain the 'S' twist as used in yarn formation. (4 marks)
- (c) Describe each of the following types of yarns:
- (i) slub; (2 marks)
  - (ii) textured; (2 marks)
  - (iii) cable; (2 marks)
  - (iv) crimp. (2 marks)
- (d) Identify the **two** categories of silk moths. (2 marks)

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