

2803/102

TEXTILE SCIENCE I AND  
CLOTHING CONSTRUCTION I THEORY

June/July 2019

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN FASHION DESIGN AND CLOTHING TECHNOLOGY  
MODULE I

TEXTILE SCIENCE I AND CLOTHING CONSTRUCTION I THEORY

3 hours

INSTRUCTIONS TO CANDIDATES

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

*Answer any THREE questions from section A and any TWO questions from section B 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 pages are printed as indicated and that no questions are missing.**

SECTION A: TEXTILE SCIENCE I (60 marks)

Answer any **THREE** questions from this section.

1. (a) Describe the following preparatory finishes which can be applied on cotton yarns:
- (i) sizing; (2 marks)
  - (ii) mercerization; (2 marks)
  - (iii) bleaching. (2 marks)
- (b) Explain five factors which determine the end use of a fibre. (10 marks)
- (c) Distinguish between 'cellulosic' and 'proteinic', fibres citing an example in each case. (4 marks)
2. (a) Highlight three objectives of each of the following stages in cotton fibre production:
- (i) carding; (3 marks)
  - (ii) drawing. (3 marks)
- (b) Explain three aims of fibre testing. (6 marks)
- (c) Describe four factors which determine yarn properties. (8 marks)
3. (a) Outline six uses of threads. (6 marks)
- (b) Describe five fabric characteristics which result from the construction method. (10 marks)
- (c) Explain two shortcomings of blending textile fibres. (4 marks)
4. (a) Explain five requirements for effective use of vat dyes. (10 marks)
- (b) Explain five causes of faults during a fabric construction process. (10 marks)
5. (a) Explain three factors which contribute to the cover power of a fabric. (6 marks)
- (b) Highlight four ways of eradicating pests during fabric storage. (6 marks)
- (c) With the aid of an illustration, plot a 2/1 right handed twill weave, citing four of its possible characteristics. (8 marks)

**SECTION B: CLOTHING CONSTRUCTION I THEORY (40 marks)**

*Answer any TWO questions from this section.*

6. (a) Explain **three** advantages of using the correct needle type during sewing. (6 marks)
- (b) Outline **four** causes of each of the following sewing defects:
- (i) puckered seam; (4 marks)
- (ii) skipped stitches. (4 marks)
- (c) Describe **three** ways of finishing a collar. (6 marks)
7. (a) Explain **three** objectives of a fusing process. (6 marks)
- (b) Outline **six** ways of controlling fullness on a garment. (6 marks)
- (c) Outline **four** ways of finishing a waist seam. (4 marks)
- (d) State **four** functions of a tape measure. (4 marks)
8. (a) Outline the procedure for making a T-shirt with the following features:
- (i) faced neckline with a slit opening; (17 marks)
- (ii) set in sleeves with machined hems.
- (b) Outline **three** ways of achieving flatness on a curved seam. (3 marks)

**THIS IS THE LAST PRINTED PAGE.**