

2803/102
TEXTILE SCIENCE I AND CLOTHING
CONSTRUCTION I THEORY
Oct./Nov. 2018
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 question 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 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.

SECTION A: TEXTILE SCIENCE I (60 marks)



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

1. (a) Explain **two** objectives of each of the following fabric processes:
- (i) shearing; (4 marks)
 - (ii) degumming. (4 marks)
- (b) Outline **four** suitable properties in each of the following fibre types:
- (i) linen; (4 marks)
 - (ii) wool. (4 marks)
Handwritten notes: wool is found in the form of staple fibres. This fibre found in its diameter is about 17-25 microns. Moisture regain is about 15-20%.
- (c) Outline **four** effects of twisting yarns. (4 marks)
2. (a) Explain each of the following terms as used in yarn production:
- (i) drawing; (2 marks)
 - (ii) blending; (2 marks)
 - (iii) combing; (2 marks)
 - (iv) carding. (2 marks)
- (b) Explain **two** objectives of grading natural fibres. (4 marks)
- (c) Highlight **four** characteristics of mercerised fabrics. (6 marks)
- (d) Explain the term 'wet processing' and cite an example. (2 marks)
3. (a) Describe **three** ways of strengthening natural yarns. (6 marks)
- (b) Outline **three** factors which determine the choice of a fabric finish. (6 marks)
- (c) Explain **four** causes of faults during woven fabric formation. (8 marks)
4. (a) Explain **three** objectives of blending fibres. (6 marks)
- (b) (i) Outline **two** advantages and **two** disadvantages of dyed yarns in fabric construction. (8 marks)
- (ii) Describe **two** characteristics of correctly dyed fabric. (2 marks)
- (c) Illustrate the structure of a 2/2 left hand twill weave. (4 marks)

5. (a) Outline five differences in a burning test between cotton and wool. (5 marks)
- (b) Distinguish between the following:
- (i) a balanced plain weave and an unbalanced plain weave; (4 marks)
- (ii) warp faced twill and even sided twill. (4 marks)
- (c) Identify the part of the plant from which each of the following fibres are obtained:
- (i) cotton; - seed (1 mark)
- (ii) linen; - Bast / stem (1 mark)
- (iii) coir; - fruit (1 mark)
- (iv) sisal; - leaf (1 mark)
- (v) hemp; - leaf (1 mark)
- (d) Identify the two categories of wool fibres. (2 marks)

SECTION B: CLOTHING CONSTRUCTION I (40 marks)

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

6. (a) Outline five possible effects of accidents in a clothing workshop. (5 marks)
- (b) Identify six ways of finishing an armhole. (6 marks)
- (c) Outline the procedure for making a culotte with the following details:
- (i) side pockets;
- (ii) back yoke;
- (iii) elasticated waistband;
- (iv) machined hem. (9 marks)

balanced plain weave is where the number of shaded threads are equal with the number of unshaded threads as unbalanced plain weave is where the number of unshaded threads are not equal with the number of shaded threads.

7. (a) Highlight **two** objectives of each of the following:
- (i) under stitching; (2 marks)
 - (ii) top stitching; (2 marks)
 - (iii) padding. (2 marks)
- (b) Highlight **four** factors to consider when choosing a collar. (6 marks)
- (c) Identify **four** ways of decorating a shirt collar. (4 marks)
- (d) Outline **four** characteristics of a suitable button fastener. (4 marks)
8. (a) Explain **two** factors which determine the strength of a seam. (4 marks)
- (b) Explain **three** benefits of ensuring correct machine adjustment. (6 marks)
- (c) Identify **four** areas where control of fullness can be applied in a garment. (4 marks)
- (d) Outline **two** functions of each of the following:
- (i) pinking shears; (2 marks)
 - (ii) bodkin; (2 marks)
 - (iii) fasteners. (2 marks)

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