

2803/102  
TEXTILE SCIENCE I AND  
CLOTHING CONSTRUCTION I THEORY  
June/July 2022  
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 EIGHT questions in 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 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) (i) Distinguish between 'spun yarns' and 'filament yarns'. (3 marks)  
 Spun yarns are yarns made from natural fibres hence they are short and can be measured in mill or centimeters while filament yarns are yarns that are made from man made fibres that are wider in length hence measured in KM (5 marks)
- (ii) Outline five characteristics of carded yarns. (5 marks)
- (b) Highlight six end uses of wool fibres. (6 marks)  
 - Making of garments - Home furnishing.  
 - Making threads
- (c) Outline six properties of cotton fibres. (6 marks)
2. (a) Outline five general characteristics of each of the following:
- (i) low absorbency fibres; (5 marks)
- (ii) amorphous fibres. (5 marks)
- (b) Highlight four fabric properties which can be affected by the cross sectional structure of a fibre. (4 marks)  
 Strength, Diameter, Shrinkage, Reaction to bleaches
- (c) Explain three parameters to check during a visual fibre identification process. (6 marks)  
 Size, Texture, Lustre/brightness & dullness
3. (a) (i) Explain three shortcomings of fabric finishes. (6 marks)
- (ii) Identify four types of chemical finishes. (4 marks)
- (b) Outline four processes undertaken in the conversion of yarns into threads. (4 marks)
- (c) Explain three ways of modifying yarn properties. (6 marks)  
 Dyeing, Mixing/blending, Bleaching
4. (a) Describe four colour application stages in natural textile products citing two advantages in each case. (10 marks)  
 Dyeing
- (b) Identify four characteristics of plain woven fabrics. (4 marks)
- (c) Explain three objectives of preparatory processes in textiles. (6 marks)  
 Soaking to separate, Cleaning to remove dirt, Combing to separate the fibres finely.
5. (a) Briefly explain four causes of faults in woven fabrics. (6 marks)
- (b) Explain four differences between cellulosic and protein fibres. (8 marks)



- (c) Illustrate each of the following fabric structures:
- (i)  $\frac{2}{3}$  left hand twill; (4 marks)
- (ii)  $\frac{1}{1}$  plain weave. (2 marks)

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

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

6. (a) Outline **four** ways of decorating a yoke. *shaping the yoke in diff styles cutting on different fabrics using a different fabric* (4 marks)
- (b) Explain **three** advantages of separate facings. (6 marks)
- (c) Outline **four** characteristics of correct quality buttonholes. *- same sized as a button - well positioned* (4 marks)
- (d) Highlight **six** aims of lining a garment. *- straight* (6 marks)
7. (a) Explain **three** ways of decorating seams. *using pinking shears* (6 marks)
- (b) Briefly explain **four** factors to consider when selecting needles for machine stitching. *Type of the machine - Purpose - Quality - Speed* (6 marks)
- (c) Explain **four** ways of reinforcing a curved seam. (8 marks)
8. (a) Explain **three** functions of trimmings. (6 marks)
- (b) Explain **two** ways of ensuring accurate fitting of garment parts during sewing. (4 marks)
- (c) Outline the procedure for making an inseam pocket. (6 marks)
- (d) Outline **four** advantages of hand stitches. (4 marks)

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