



UNIVERSITY OF ESWATINI
FINAL EXAMINATION PAPER

PROGRAMME : BACHELOR OF SCIENCE IN TEXTILE
APPAREL DESIGN AND MANAGEMENT YEAR
II

COURSE CODE : TAD205

TITLE OF PAPER : TEXTILE SCIENCE

TIME ALLOWED : TWO (2) HOURS

INSTRUCTIONS : ANSWER QUESTION ONE (1)
AND ANY OTHER TWO (2) QUESTIONS

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THE CHIEF INVIGILATOR**

QUESTION 1(COMPULSORY)

- a) Discuss the properties of flax under the following sub headings (2x4= 8 Marks)
i) Fabric durability
ii) Aesthetics
- b) Explain why it is best to dry clean products made of silk than to hand wash them. (8 Marks)
- c) Briefly describe any **four (4)** types of fancy yarns. (12 Marks)
- d) Explain the effect of twist on the following yarn properties (2x2= 4 Marks)
i) Strength
ii) Moisture absorption
- e) State **four (4)** general properties of synthetic fibres. (4 Marks)
- f) Properties of ring spun yarn and their resultant fabrics differ with the fibre length and alignment in the yarn. Briefly explain how fibre length affects yarn properties (4 Marks)

[TOTAL MARKS= 40]

QUESTION 2

- a) State **five (5)** characteristics of flat filament yarns. (5 Marks)
- b) Explain the following woven structures. (3x4= 12Marks)
i) Plain weave
ii) Twill weave
iii) Satin weave
- c) Briefly describe a knitted loop structure. (4 Marks)
- d) Explain why fibre identification is important. (4 Marks)
- e) Briefly describe a single jersey fabric (5 Marks)

[TOTAL MARKS= 30]

QUESTION 3

- a) Describe the behaviour of linen and polyester during the burning test under the following headings. (10 Marks)

Behaviour up- to flame	Behaviour in flame	Behaviour once removed from flame	Odour	Type of residue

- b) Briefly describe the following processes in the production of viscose rayon (9 Marks)
i) Steeping
ii) Degassing
iii) Drawing
- c) Describe an appropriate spinning method for making polyester filament yarns and give the process requirements. (8 Marks)

- d) State **three (3)** properties of wool that are influenced by the wool crimp. (3 Marks)

[TOTAL MARKS= 30]

QUESTION 4

- a) Briefly describe **five (5)** performance characteristics of knitted fabrics. (10 Marks)
- b) Explain how the structure of wool influences its moisture characteristics. (8 Marks)
- c) Describe the following non -woven fabric structures (4x2=8 Marks)
- i) Felts
 - ii) Spunlaced
 - iii) Stitch bonded
 - iv) Melt blown
- d) Explain scroop in relation to silk fibres. (4 Marks)

[TOTAL MARKS= 30]