



1ST SEM. 2018/19

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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**

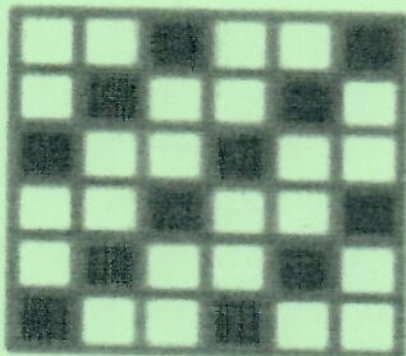
TIME ALLOWED : **TWO (2) HOURS**

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

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THE CHIEF INVIGILATOR**

QUESTION 1 (COMPULSORY)

- a) Study the fabric structure below and determine the following: **(8 Marks)**



- i) Name of the weave structure
 - ii) **Two (2)** common fabrics having the above structure
 - iii) **Five (5)** characteristics of the weave
- b) Briefly explain the following fabric finishes **(8 Marks)**
- i) Soil release finished fabrics
 - ii) Antimicrobial finished fabrics
 - iii) Water repellent finished fabrics
 - iv) Mercerized fabrics
- c) Explain the production process of acetate fibres. **(10 Marks)**
- d) Distinguish between each of the following in silk production **(4 Marks)**
- i) Weighting and degumming
 - ii) Reeling and throwing
- e) Discuss any **five (5)** properties of wool, relating the structure of the fibre to the properties. **(10 Marks)**

[TOTAL MARKS= 40]

QUESTION 2

- a) Name and describe the basic motions of the weaving process **(8 Marks)**
- b) Using polycotton as an example discuss the importance of blending textile fibres **(8 Marks)**
- c) Explain with a diagram the melt spinning of polyester and state the key requirements for the process **(10 Marks)**
- d) List any **four (4)** characteristics of carded yarns **(4 Marks)**

[TOTAL MARKS = 30]

QUESTION 3

- a) Discuss how you would design a disposable baby diaper in terms of materials to be used and fabric structure. In your discussion explain your choice of material and fabric structure (10 Marks)
- b) Describe the effect of acids and alkali on (8 Marks)
- i) Wool
 - ii) Cotton
 - iii) Polyester
 - iv) Viscose rayon
- c) Name the chemical constituent of cotton, and briefly describe how that affects its properties. (4 Marks)
- d) Briefly describe a single jersey weft knit fabric structure. (8 Marks)

[TOTAL MARKS =30]**QUESTION 4**

- a) Describe any **three (3)** essential characteristics of fibres for textile applications (9 Marks)
- b) Classify fabric finishes according to degree of permanence and briefly describe the different classes. (12 Marks)
- c) What are regenerated fibres? Give **two (2)** examples (4 Marks)
- d) Define Fancy yarns and give **three (3)** examples of fancy yarns (5 Marks)

[TOTAL MARKS = 30]