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**1<sup>ST</sup> SEM. 2016/17**

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**UNIVERSITY OF SWAZILAND  
SUPPLEMENTARY 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**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY  
THE CHIEF INVIGILATOR**

**QUESTION 1 (COMPULSORY)**

- a) Name and describe the **two (2)** types of rib woven fabrics (6 Marks)
- b) Define the following terms (6 Marks)
- i. Course
  - ii. Wales
  - iii. Loop
- c) Explain **five (5)** different performance characteristics of knitted fabrics (10 Marks)
- d) Describe how you can identify the following fibres using solubility test (9 Marks)
- i. Cotton
  - ii. polyester
  - iii. Wool
- e) Briefly describe the effect of yarn texturing on the following fabric properties: (9 Marks)
- i. Comfort
  - ii. Aesthetics

[TOTAL MARKS = 40]

**QUESTION 2**

- a) Describe the silk fibre production process. (12 Marks)
- b) Explain the **three (3)** basic woven structures. (12 Marks)
- c) Describe the process of discharge printing. (6 Marks)

[TOTAL MARKS = 30]

**QUESTION 3**

- a) Classify fibres according to their type, giving an example for each class. (16 Marks)
- b) Briefly describe the basic manufacturing principle for synthetic fibres. (8 Marks)
- c) State **four (4)** general properties of synthetic fibres. (4 Marks)
- d) Name **two (2)** industrial applications of nylon (2 Marks)

[TOTAL MARKS = 30]

**QUESTION 4**

- a) Define Fancy yarns. (2 Marks)
- b) Describe any **four (4)** types of fancy yarns. (8 Marks)
- c) Give a detailed description of how Flax fibres are produced. (10 Marks)
- d) Name **five (5)** types of non-woven fabrics. (5 Marks)
- e) Give a detailed description of simple yarns. (5 Marks)

[TOTAL MARKS = 30]