



UNIVERSITY OF SWAZILAND
RESIT EXAMINATION PAPER

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

COURSE CODE : TAD206

TITLE OF PAPER : FABRIC CONSTRUCTION

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) Give a detailed explanation of Rotor spinning under the following subheadings (12 Marks)
- i. Sliver feed
 - ii. Sliver opening
 - iii. Fibre transport
 - iv. Fibre collection
 - v. Yarn formation
 - vi. Yarn take off and winding
- b) With the aid of diagrams describe **three (3)** types of needles that can be used in machine knitting (12 Marks)
- c) A cotton fabric is woven from 18tex warp and 21tex weft. The fabric has 20 ends/ cm and 22 picks/ cm, and the warp and weft crimp percentages are 2.0 and 9.0 % respectively. Calculate the areal density (fabric weight g/m^2) (8 Marks)
- d) Briefly explain the **four (4)** main functions of the blow room in spinning (8 Marks)

[TOTAL MARKS =40]

QUESTION 2

- a) With the aid of a flow diagram explain the Textile supply value chain (10 Marks)
- b) With the aid of a properly labelled diagram, explain the cotton carding process in spinning. (20 Marks)

[TOTAL MARKS =30]

QUESTION 3

- a) With the aid of a properly labelled diagram explain the sizing process using a multi cylinder machine (20 Marks)
- b) Name **two (2)** types of machines widely used in the production of outerwear and underwear in weft knitting (2 Mark)
- c) Name and describe **two (2)** types of faults that can be found in weft knitted fabrics (8 Marks)

[TOTAL MARKS = 30]

QUESTION 4

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| a) Give a detailed description of the roving process | (12 Marks) |
| b) State and explain the primary motions of weaving | (8 Marks) |
| c) What is the effect of the underlap on a warp knitted structure | (5 Marks) |
| d) Name five (5) basic warp knitted fabrics | (5 Marks) |

[TOTAL MARKS=30]