



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

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

(12 Marks)

(8 Marks)

(5 Marks)

(5 Marks)

[TOTAL MARKS=30]