UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME   :   BACHELOR OF SCIENCE IN
                                HE, HEE and TADM YEAR II

COURSE CODE   :   TADM 205

TITLE OF PAPER   :   TEXTILE SCIENCE & LAUNDRY

TIME ALLOWED   :   TWO (2) HOURS

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

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QUESTION 1 [COMPULSORY]

(a)   With the assistance of an illustration, describe the **four (4)** different yarn structures.

[12 marks]

(b)   Textile fibres can be utilized for industrial purposes. State **two (2)** examples under each area where textiles can be used.   7 X 3 = [21 marks]

(c)   Differentiate between amorphous and crystalline areas of fibre polymers. What advantage does each state have?   [6 marks]

[Total marks = 40]

QUESTION 2

(a)   Fibres can be analyzed on four (4) aspects of fibre morphology. Describe the **four (4)** aspects and include illustrations to make your explanation clearer using a wool fibre.   [20 marks]

(b)   All disciplines have to address ways of reducing environmental pollution in order to preserve the natural environment and maintain a healthy balance in the ecosystem which should benefit future generations. In textile production and care, what measures can be utilized to contribute towards the reduction of environmental pollution?   5 X 2 = [10 marks]

[Total marks = 30]

QUESTION 3

(a)   The pricing of ordinary cotton fibres is not competitive with organic cotton. Why is Swaziland redirecting its cotton production toward organic cotton? Who is the champion of this initiative in Swaziland?   [10 marks]

(b)   From the chemical properties of cotton, what are the three comfort properties of the fiber?   .   [8 marks]

(c)   Describe the three basic methods of fibre extrusion for man-made fibres and give one example of fibre produced by each method.   [12 marks]

[Total marks = 30]

QUESTION 4

(a)   Advise a rural woman who does her family's laundry using water from a nearby river on the best cleaning agent to use. Justify your recommendation and give two limitations of using the cleaning agent.

6 X 2 +2 = [14 marks]

(b)   Describe two effects on four ingredients used in the above cleaning agent.

[8 marks]

(c)   Explain experiment you would conduct to ascertain the dimensional stability of a fabric before cutting and sewing a garment if in doubt of size retention after the first washing.

[8 marks]

[Total marks = 30]