

1ST SEM. 2017/18



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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMME : BACHELOR OF SCIENCE IN TEXTILE, APPAREL
DESIGN AND MANAGEMENT YEAR IV**

COURSE CODE : TADM 404

TITLE OF PAPER : CONTEMPORARY TEXTILES

TIME ALLOWED : TWO (2) HOURS

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

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INVIGILATOR**

QUESTION 1 (COMPULSORY)

a) Discuss how the textile industry has contributed to the environment pollution through the use of the following in its processing plants.

- i) Chemicals
- ii) Water

(20 Marks)

b) The concept of re-using linen is slowly getting eliminated and shift to single use disposable products is the norm of the day in hospitals and beauty care. Discuss **six (6)** points to justify the shift from re-usable to disposable textiles in the medical and beauty care.

(12 Marks)

c) Discuss **four (4)** functional finishes incorporated into textiles to enhance performance. Justify the need for each finish.

(8 Marks)

[TOTAL MARKS = 40]

QUESTION 2

a) Discuss **two (2)** environmentally friendly processes and **two (2)** practices used in the production and manufacturing of Eco-textiles.

(12 Marks)

b) Define and give **two (2)** examples for each of the following:

- i) Intelligent textiles
- ii) Smart textiles
- iii) Wearable electronics

(12 Marks)

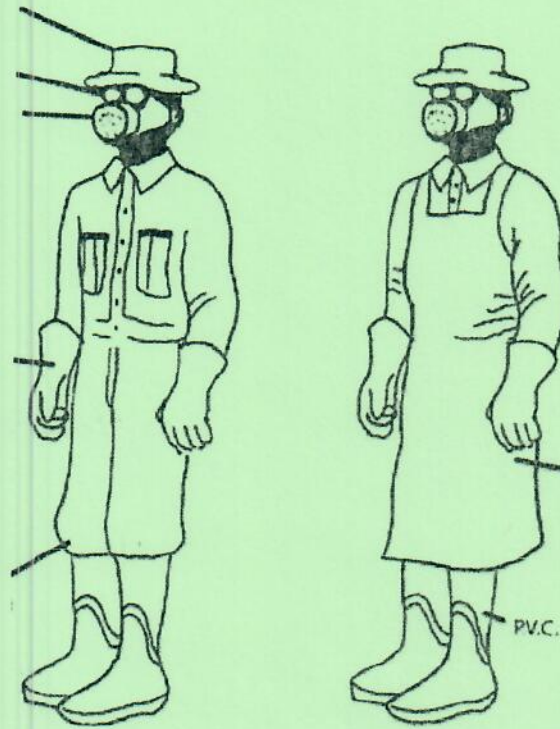
c) Define and give **five (5)** examples of fancy yarns.

(6 Marks)

[TOTAL MARKS = 30]

QUESTION 3

a) Describe the function of any **five (5)** items constituting the protective gear below.



(10 Marks)

b) Explain **two (2)** applications of each of the following nanomaterials in the textile industry.

- i) Nano clays
- ii) Carbon nanotubes
- iii) Metal oxide nanoparticles
- iv) Nano fibres

(8 Marks)

c) Discuss how the following textile properties are important and desirable in the care of physically disabled persons:

- i) Appearance
- ii) Comfort properties
- iii) Safety properties
- v) Mechanical durability

(12 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- a) Using labelled illustrations, describe the compound fabric you constructed as a project for TADM 404. State its use (s) and discuss the properties and functionality of each component. **(12 Marks)**
- b) Today, the focus is on specialty textiles engineered for specific end-uses. Describe how the following smart garments function.
- i) Viking Smart fire fighting gear
 - ii) NASA aerogel jacket
 - iii) Biosensor underwear
 - iv) Smart running shoes from Nike
- (12 Marks)**
- c) Explain **three (3)** points on how recycling is beneficial to the environment. **(6 Marks)**

[TOTAL MARKS = 30]