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**
INSTRUCTION	:	**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) A low cost, lightweight, dimensionally stable and absorbent fabric is required for cleaning cloths for the home. Which fabric structure is most appropriate for this end-use? Justify your answer.

i) Woven pile
ii) Knitted pile
iii) Non-woven washable web
iv) Thermally bonded non-woven

(5 Marks)

b) Name an organic fibre source and explain why organic fibres are increasingly used in textile production.

(5 Marks)

c) Name **two (2)** innovative finishing techniques and explain how the finishes are applied, how they enhance fabric performance and their specific end use applications. Tabulate your answer as shown below.

Innovative finishing techniques	How the finishes is applied	How it enhances fabric performance	Specific end use applications

(2 X 6=12 Marks)

d) Lightweight, high performance backpacks for mountain climbers are designed with specific consumer needs in mind. With reference to a fibre you have studied, explain how the selection of yarn and fabric structure will determine the end use applications for that fibre.

(8 Marks)

e) Explain how clothing manufacturers have responded to changing consumer demand for ultra violet protection factor (UPF) clothing.

(5 Marks)

f) From the list below choose the most appropriate textile furnishing that requires a fire retardant finish? Justify your answer.

i) Cotton towelling bath mat
ii) Cotton velveteen theatre curtains
iii) Wool twill weave infants blanket
iv) Wool plain weave upholstered restaurant chairs

(5 Marks)

[TOTAL MARKS = 40]

QUESTION 2

a) From the list below, choose one fibre, yarn and fabric structure that would be most suitable for the production of a wet weather umbrella? Justify your answer.

i) Nylon, staple spun, warp knit
ii) Polyester, monofilament, weft knit
iii) Nylon, multifilament, plain weave
iv) Viscose rayon, high twist, twill weave

(9 Marks)

b) Contemporary swimwear designers attempt to cater for changing trends in society. Which of the following would be the most important in addressing these trends? Justify your answer.

i) Innovative design, lifestyle demands, manufacturing facilities and aesthetic design
ii) Innovative design, sun protection, environmental sustainability and aesthetic design
iii) Environmental sustainability, sun protection, decorative techniques and technological development
iv) Environmental sustainability, economic considerations, manufacturing techniques and decorative techniques

(8 Marks)

c) How can a fabric finish influence the choice of fabric for a specific end-use? Provide an example in your response.

(4 + 3 = 7 Marks)

d) Explain why fabric produced from yarns spun from microfibres has properties and performance that makes it suitable for protective outerwear.

(6 Marks)

[TOTAL MARKS = 30]

QUESTION 3

a) Seats in a public theatre need to be covered with fabric that will satisfy fabric performance and safety requirements. Give the most appropriate fibre content, yarn, fabric structure and fabric finish. Justify your selection.

(4 X 3 = 12 Marks)

b) Give **four (4)** possible applications of metal matrix composites (MMC) in textiles.

(4 X 2 = 8 Marks)

c) Give one example of an end use of metalized fabrics.

(2 Marks)

d) Describe **one (1)** advantage and **one (1)** disadvantage of washable web fabric innovations for:

i) The consumer

ii) The environment

(2 X 4 = 8 Marks)

[TOTAL MARKS = 30]

QUESTION 4

a) Choose any **five (5)** from the list below and explain how they play a role in the production of emerging high performance fabrics. To strengthen your answer, give an example of the innovative performance and how it is achieved.

i) Fabric construction
ii) Techno naturals
iii) Stretch technology
iv) Finishing treatments
v) Interactive technology
vi) Reflect optic technology
vii) Thermoregulators

(5 X 4= 20 Marks)

b) Choose **two (2)** sports activities and explain how the design and fabrication of sportswear of each has been adapted to suit the sport

(2 X 5= 10 Marks)
[TOTAL MARKS = 30]