



**2<sup>nd</sup> SEM. 2007/2008**

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

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

**COURSE CODE : TADM 206**

**TITLE OF PAPER : FABRIC CONSTRUCTION DESIGN**

**TIME ALLOWED : TWO (2) HOURS**

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

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GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION 1 [COMPULSORY]**

- (a) Define the spinning of yarns and describe the two major yarn spinning systems. [20 marks]
- (b) Explain the uses of winding where yarns are transferred from one package to another. [10 marks]
- (c) Briefly describe the parts of a cone winding machine. [10 marks]

**[Total marks = 40]**

**QUESTION 2**

- (a) Describe the two main types of creels used in textile mills. [4 marks]
- (b) Briefly describe the five variations of one of the creel type and state one advantage or disadvantage for each. 3 X 5 = [15 marks]
- (c) Calculate the warping time given 80% machine efficiency, machine speed of 600m/min for a sheet length of 10 000m, and a quarter of an hour to remove and load the next beam. [10 marks]
- (d) A customer has ordered a fabric to be delivered within a short period of time and there is yarn already spun but you need to ascertain its linear density. Calculate the tex number for the 500m that weighs 16g. [1 mark]

**[Total marks = 30]**

**QUESTION 3**

- (a) Illustrate a plain weave seen through the enlargement of fabric intersections using a magnifying glass, the point paper format or weave plan and two rows of weft cross-section showing the first five weft and five picks of the fabric structure. 3 X 4 = [12 marks]

- (b) Define the following:
- (i) Weave repeat
  - (ii) Mutt weave
  - (iii) Cam
  - (iv) Balanced twill weave
  - (v) A creel
  - (vi) Reed
  - (vii) Sizing
  - (viii) Shedding
  - (ix) Z twist

[18 marks]

**[Total = 30 marks]**

#### **QUESTION 4**

- (a) Illustrate using a point paper the following weaves.
- (ii) 3/3 matt weave.
  - (iii) 4/4, 3/3, 2/2, 2/4, 4/2 irregular mutt weave.

[5 marks]

[25 marks]

**[Total marks = 30]**