



**MACHAKOS UNIVERSITY**

**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**

**DEPARTMENT OF FASHION DESIGN AND MARKETING**

**REGULAR UNIVERSITY EXAMINATIONS 2022/2023 ACADEMIC YEAR**

**THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
FASHION DESIGN AND MARKETING**

**HFM 308: TEXTILE PERFORMANCE TESTING**

**Date:**

**Time: 2 Hours**

**INSTRUCTIONS:**

- i) This paper consists of **five questions**.*
- ii) Answer **Question 1** and any other **two** questions.*
- iii) **Question 1**=20 marks*
- iv) **Question 2 to 5**=15 marks each*

**Question One**

a) Define the following terminologies as used in textile performance testing.

- i. Fume fading
- ii. Abrasion
- iii. Frosting
- iv. Moisture equilibrium
- v. Flexibility.

**(5 marks)**

- b) Name any three categories of properties that one needs to focus on when testing textile materials. **(3 marks)**
- c) State and briefly explain the three requirements that a textile sample must satisfy before any meaningful tests can be carried out. **(6 marks)**
- d) Outline six factors that influence results when testing for abrasion. **(6 marks)**

### **Question Two**

- a) With aid of diagrams explain the air-flow method used in determining specific surface of textile material. **(11 marks)**
- b) A piece of cloth weighs 150gms when conditioned, the cloth is then oven-dried and the new weight becomes 145gm. Calculate the moisture content and regain of the cloth. **(4 marks)**

### **Question Three**

In determining dimensional stability of fabrics there are various methods used. However, there is a standard procedure that outlines the steps to be used in carrying out any dimensional changes test. Discuss the five basic steps followed. **(15 marks)**

### **Question Four**

Explain the methods one would use to determine the twist of a filament yarn. **(15 marks)**

### **Question Five**

- a) Explain four defects that may occur in a fabric as a result of imperfections in the yarns. **(4 marks)**
- b) Discuss eleven flaws that could be detected in finished knitted fabrics. **(11 marks)**