KUMARAGURU college of technology
character is life

Register Number: ……..

B.TECH DEGREE EXAMINATIONS: MAY 2015

(Regulation 2009)

Sixth semester

FASHION TECHNOLOGY

FTY114 :Textile Testing and Apparel Quality Evaluation

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. **Statement I:** In random sampling, all members of the population are not having an equal and independence chance of being selected.

   Statement II: In biased sampling, individuals or groups from the population are not represented in the sample.

   a) Both statements I & II are true
   b) Both statements I & II are false
   c) Statement I is true & Statement II is False
   d) Statement I is false & Statement II is true.

2. Identify the equivalent yarn number in English system (Ne) for 20 Tex.

   a) 20
   b) 40
   c) 60.5
   d) 29.5

3 **Assertion (A)** : When yarn twist increases, the strength of the yarn reaches a maximum value, after which the strength will reduce as the yarn twist is increased still further.

Reason (R) : As the twist increases, the angle that the fibres make with the yarn axis increases, so preventing them from developing their maximum strength which occurs when they are oriented in the direction of the applied force.

   a) Both Assertion (A) & Reason (R) are correct and (R) is the correct reason.
   b) Both Assertion (A) & Reason (R) are correct and (R) is not the correct reason.
   c) Assertion (A) is correct & Reason (R) is wrong.
   d) Assertion (A) is wrong & Reason (R) is correct.

4. In classification of yarn faults, the long thin fault is represented by……

   a) E
   b) F
   c) G
   d) I

5. **Assertion (A)** : In tensile strength testing, the length of the specimen has an important effect on the measured strength of the material.

Reason (R) : A material when put under stress will always break at its weakest point therefore the longer the length of material that is stressed, the greater will be the probability of finding a weak spot within the test length.

a) Both Assertion (A) & Reason (R) are correct and (R) is the correct reason.
b) Both Assertion (A) & Reason (R) are correct and (R) is not the correct reason.
c) Assertion (A) is correct & Reason (R) is wrong.
d) Assertion (A) is wrong & Reason (R) is correct.

6. In ICI pill box test, the grade "3" denotes….

a) No change
b) change
c) Moderate change
d) Severe change

7. **Statement I:** Drape is an important factor when presenting the aesthetics and functionality of both, the fabric and the created garment.

Statement II: Drape is not influenced by the fabric's parameters such as structure, yarn type, fibre content, as well as its finishing treatments.

a) Both statements I & II are true
b) Both statements I & II are false
c) Statement I is true & Statement II is False
d) Statement I is false & Statement II is true.

8. Which of the following is an incorrect statement with regard to air-permeability of the fabric?

a) Air permeability is an important factor for air bags, clothing, mosquito netting, parachutes, etc.,
b) Air-permeability can also be used to provide an indication of the breathability of weather-resistant and rainproof fabrics.
c) Fabric construction factors and finishing techniques does not influence the air permeability of the fabric.
d) Fabrics with different surface textures on either side can have a different air permeability depending upon the direction of air flow.

9. **Statement I:** The seam failure is caused due to sewing thread either wears out or fails before the fabric does.

Statement II: The seam failure is caused by seam slippage.

a) Both statements I & II are correct
b) Both statements I & II are wrong
c) Statement I only correct
d) Statement II only correct.

10. In colour fastness test results evaluation using colour change grey scale, when there is no change in the colour of a test specimen it would be classified as ……..

a) 5
b) 0
c) 1
d) 3

PART B (10 x 2 = 20 Marks)

11. Elucidate on i) Standard conditions for textile testing and ii) Relationship between yarn count and yarn diameter.
12. Define moisture regain and moisture content.
13. Outline the method of measuring folded yarn twist.
14. What is count strength product? Mention its significance.
15. Explain the influence of crimp on fabric properties.
16. Outline the working principle of ballistic strength tester.
17. Illustrate the principle of measuring fabric drape.
18. Outline the working principle of fabric stiffness tester.
19. Explain the principle of testing zipper strength.
20. Illustrate the principle of measuring the spirality in knitted garments.

PART C (5 x 14 = 70 Marks)

21. a) Explain the sampling techniques for fibre, yarn and fabric.

(OR)

b) Elaborate the yarn numbering system and enumerate the procedure of determining yarn count using beesley's balance.

22. a) Analyse the causes for yarn hairiness and enumerate the procedure of measuring the yarn hairiness with uster hairiness tester.

(OR)

b) Explain the working principle of uster evenness tester and the procedure of measuring yarn irregularities along with spectrogram analysis.

23. a) Discuss the factors affecting tensile strength testing of fabrics and explain the measurement of fabric tensile strength using raveled strip and grab methods.

(OR)

b) Critically analyse the factors affecting abrasion resistance tests and enumerate the procedure of measuring fabric abrasion resistance using martindale abrasion

24. a) Explain the working principle of crease recovery tester and the procedure of measuring the fabric crease recovery angle.

(OR)

b) Elaborate on the working principle of fabric air permeability tester and the procedure of measuring air-permeability of fabric.

25. a) Evaluate the various types of testing seam slippage.

(OR)

b) Explain the procedure of testing colour fastness to washing, rubbing and light.

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