KUMARAGURU
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Register Number:……..

B.TECH DEGREE EXAMINATIONS: NOV/DEC 2014

(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. Testing laboratories require the atmosphere to be maintained at ……..in order to carry out accurate physical testing of textiles.

   a) 65 ± 2% RH and 20 ± 2°C
   b) 65 ± 2% RH and 30 ± 2°C
   c) 65 ± 5% RH and 20 ± 2°C
   d) 65 ± 5% RH and 30 ± 2°C

2. **Statement I** : Relationship between yarn count and diameter is dependent upon specific volume of yarn

   Statement II: Specific volume of yarn depends upon the raw material, type of spinning system, twist factor and spinning parameters.

   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.

3. Which of the following is a correct formula to find the twist per inch (TPI) in the yarn in English count system?

   a) Twist multiplier x √Count
   b) Twist multiplier + √Count
   c) Twist multiplier/√Count
   d) Twist multiplier - √Count

4. Which of the following letter represents long thin faults in uster classimat yarn faults classification?

   a) A
   b) F
   c) H
   d) I

5. **Statement I** : The Elmendorf tear tester is a pendulum type ballistic tester which measures energy loss during tearing.

   Statement II: Bursting strength is suitable for measuring strength of knitted fabrics, non-woven fabrics and lace fabrics since the material is stressed in all directions at the same time.

   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.

6. The fabric pilling test result rating "5" denotes ……..

   a) Slight change in the fabric
   b) Moderate change in the fabric
   c) Severe change in the fabric
   d) No change in the fabric

7. Assertion **(A)**: Soft fabric drapes closer to the body forming ripples whereas stiff fabric drapes away from the body.

   Reason **(R)**: Stiffness is an attribute of fabric hand and it is one of the most important factors determining draping quality of fabric.

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

8. Which of the following is an incorrect statement?

   a) The unit of moisture vapour permeability is grams/m²/24 Hrs.
   b) The air permeability of a fabric is a measure of how well it blocks the passage of air through it.
   c) Fabric construction factors and finishing techniques influence the air permeability of the fabrics.
   d) Fabric stiffness test results are expressed as bending length of the fabric in warp and weft way direction.

9. Which of the following is not a cause for seam slippage in fabrics?

   a) Fabrics with slippery yarns
   b) Fabrics with open structure
   c) Fabrics with low warp and weft interlacings.
   d) Fabrics with close structure

10. Assertion **(A)**: Spirality problem is more in rib and interlock knitted fabrics than single jersey knitted fabrics.

Reason **(R)** : In rib and interlock knitted fabrics, the wale on the face is counter balanced by a wale on the back.

a) Both Assertion (A) and Reason (R) are correct and (R) is the correct reason

b) Both Assertion (A) and Reason (R) are correct and (R) is not the correct reason

c) Assertion (A) is correct and Reason (R) is wrong

d) Assertion (A) is wrong and Reason (R) is correct.

PART B (10 x 2 = 20 Marks)

11. Distinguish between random sampling and biased sampling.
12. Find the equivalent count for 40sNe in tex and denier systems.
13. Define yarn hairiness.
14. Outline the significance of count strength product (CSP).
15. List the influence of crimp on fabric properties.
16. How the assessment of pills is carried out in ICI pilling box test?
17. Compare the drapeability nature of woven and knitted fabrics.
18. Outline the working principle of shirley stiffness tester.
19. List the ASTM standard test methods for testing the strength of zipper and its parts.
20. Outline the principle of measuring the spirality in knitted fabrics and garments.

PART C (5 x 14 = 70 Marks)

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

(OR)

b) Elaborate the procedure of yarn count measurement using beesley's balance and quadrant balance.

22. a) Illustrate the working principle of uster evenness tester and furnish the procedure.

(OR)

b) Explain the working principle of tensojet tester and enumerate the test procedure.

23. a) Elaborate the testing procedure of fabric tensile strength using raveled strip and grab methods.

(OR)

b) Explain the working principle of martindale abrasion tester and furnish the test procedure.

24. a) Illustrate the working principle of crease recovery tester and list the procedure for testing the fabric crease recovery.

(OR)

b) Explain the working principle of fabric air permeability tester and enumerate the procedure for testing the fabric air permeability.

25. a) Critically evaluate the various types of seam slippage test methods for apparels.

(OR)

b) Elaborate the colour fastness testing procedure with regard to washing, rubbing and light.

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