M.TECH. DEGREE EXAMINATIONS: NOV/DEC 2010
Second Semester
TEXTILE TECHNOLOGY
TTX507: Fabric Quality Analysis

Time: Three Hours   **Maximum Marks: 100**
Answer ALL Questions:-
PART A (10 × 2 = 20 Marks)

1. Mention the fibre and yarn characteristics that influence on the fabric failure?
2. Write the role played by fatigue on fabric failure.
3. Which fabric properties are essential for maintaining thermal comfort?
4. Write the formula for testing water vapour permeability?
5. Define the term drape and drape coefficient.
6. Write the RH to be maintained and specimen size for testing crease recovery?
7. Draw the Shear curve for KESF.
8. Define fabric handle.
9. What do you mean by impact resistance?
10. List out any four essential fabric properties required for technical textiles.

PART B (5 × 16 = 80 Marks)

11. a) Explain the mechanism of fabric failure by tear test using Grab, single rip and wing rip methods.

(OR)

   b) Explain in detail about the influence of yarn characteristics and fabric structure on fabric failure.

12. a) Discuss about the role of air permeability and water vapour permeability over the thermal properties and thermal comfort of fabrics.

(OR)

   b) Explain clearly the influence of resistance to flow of heat and electrical conductivity on fabric comfort.

13. a) (i) Write in detail about study of fabric appearance in terms of crease recovery and wrinkle recovery method. (10)

     (ii) Briefly explain the testing of fabric appearance by wrinkle recovery method. (6)

(OR)

   b) With neat sketches explain the working principle of measuring pilling by using ICI pill box and correlate the results with fabric appearance.

14. a) Elucidate the methods of measurement of low stress mechanical properties by using FAST.   **(OR)**

   b) Write in detail about the influence of low stress mechanical properties on tailorability and sewability?

15. a) Discuss in detail about the evaluation of dimensional stability and flammability properties of fabrics.

(OR)

   b) Make a comprehensive note on the evaluation of technical textile fabrics for various applications.

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