M.TECH. DEGREE EXAMINATIONS: DECEMBER 2009

First Semester

APPAREL TECHNOLOGY AND MANAGEMENT

FTY502: Clothing Comfort

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

Answer All Questions:-

PART A (10 x 2 = 20 Marks)

1. Give the fundamental function and important task of clothing.

2. Define: thermal comfort & sensory comfort.

3. Give the equations for mass – balance and conservation of heat energy in dynamic heat and moisture transfer through fabric.

4. What are the 3 stages in drying behaviour of textiles?

5. Define: Fabric prickliness and stiffness

6. List the 7 pairs of bipolar comfort sensory descriptors for men winter suiting.

7. Define: Thermal absorptivity. Give units.

8. What are the properties measured by KES-F instrument?

9. Differentiate KES-F & FAST instruments.

10. Define the terms: Tailorability & Formability in garments.

PART B (5 x 16 = 80 Marks)

11. (a) Explain the various types of thermo regulatory mechanisms in human body. Draw the model and give the components of thermal regulation.

(OR)

(b) With relevant graphs discuss the concept of drying behaviour of wool and polyester fabrics.

12. (a) Write briefly on the following fabric mechanical properties and tactile pressure sensations with respect to body sensory comfort.

    i)   Fabric prickliness
    ii) Fabric smoothness and roughness
    iii) Fabric dampness

(OR)

(b) Discuss the concept of dynamic heat & moisture transfer in fabrics with relevant equations.

13. (a) Explain the influence of different factors on overall comfort perception.

(OR)

(b) Discuss the role of textile structures in providing thermal and moisture comfort of fabrics.

14. (a) Explain the working of **"ALAMBETA"** instrument with a neat sketch.

(OR)

(b) State the significance of measurement of moisture vapour permeability in fabrics. Describe a method to evaluate moisture vapour permeability in fabrics with a sketch.

15. (a) List the various subjective primary hand descriptors for men's winter and summer suiting.

(OR)

(b) Explain the various low stress fabric properties that are assessed by **"FAST".** Draw a sketch of **SIRO FAST** control chart.

****