

Register No: .....

**M.TECH. DEGREE EXAMINATION: JUNE 2011**

Second Semester

**TEXTILE TECHNOLOGY**

TTX509: Clothing Comfort

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL Questions:-**

**PART A (10 x 2 = 20 Marks)**

1. Define the term "Comfort".
2. What do you mean by quasi physiological system?
3. Enlist the parameters involved in the general description of clothing in terms of body heat regulations.
4. Categories the automatic interactions of clothing with the motion of the body.
5. Brief the effect of traverse wicking on comfort of clothing.
6. Name the different approaches for studying heat and moisture exchange in clothing systems.
7. Distinguish between dry heat transfer and rapid heat transfer.
8. Mention the fabric specifications that influence the thermal comfort.
9. What are structural properties that influence the comfort of cloth?
10. Enlist the various special fibers used for clothing comfort.

**PART B (5 x 16 = 80 Marks)**

11. a) State the physiological aspects concerned with garments. Give a detailed account on the relationship between physiology and comfort

**(OR)**

- b) (i) Explain the quantities and units to describe clothing.  
(ii) Elaborate the functional attributes in clothing.

12. a) Discuss in detail about the various need-factors of physiological and air system that influence the clothing and body interaction.

**(OR)**

- b) Explain in detail the fundamental details about the effect of body motion, wind and radiation between body and clothing material.

13. a) Briefly discuss the various heat transfer mechanism enhancing the thermal comfort of textile materials.

**(OR)**

b) Critically analyse the wicking behaviour of textile materials in longitudinal and traverse directions and their influence in moisture management.

14. a) Explain in detail about the different methods to measure the water vapour permeability of fabrics.

**(OR)**

b) Discuss in detail about the effect of structural properties of textile materials to determine the clothing comfort with respect to radiation and flammability.

15. a) Give a detailed account on subjective studies of fabric engineering related to clothing comfort.

**(OR)**

b) Write detailed notes on

(i) Non thermal properties of fabrics. (8)

(ii) Current trends and new development in test methods. (8)

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