

**M.TECH. DEGREE EXAMINATIONS: APRIL 2010**

First Semester

**TEXTILE TECHNOLOGY**

P07TX104: Theory of Coloration and Finishing

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL the Questions:-**

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

1. Outline the effect of acids on cotton.
2. Enlist the changes occurring during mercerizing
3. What is meant by substantivity of dye?
4. Brief about Donor Membrane Equilibrium?
5. Outline the effect of heat treatment on dyeing of textile materials.
6. What are Cationic Dyeable Polyesters?
7. What are Specific dye-fibre bonds?
8. What is meant by diffusion coefficient?
9. Brief about diffusion in non-steady state condition.
10. State the importance of colour difference values.

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

11. (a) Explain about the chemical structure of Viscose rayon and Polyester.

**(OR)**

- (b) Write in detail about Computer Colour Matching in textiles.

12. (a) Write about free energy in dyeing elaborately.

**(OR)**

- (b) Explain about heat of dyeing and order of reactions in detail. (8 + 8)

13. (a) Write about the influence of physical structure on dye uptake.

**(OR)**

- (b) Elaborate on chemical structure and dye uptake.

14. (a) Write in detail about surface energy and interfacial effects.

**(OR)**

(b) How do you identify dye-fibre forces? Explain.

15. (a) Discuss about boundary layers in diffusion.

**(OR)**

(b) Explain the factors influencing diffusion in dyeing.

\*\*\*\*\*