

M.TECH DEGREE EXAMINATIONS: JANUARY 2011

First Semester

TEXTILE TECHNOLOGY

TTX504: Theory of Coloration and Finishing

Time: Three Hours

Maximum Marks: 100

**Answer All Questions: -
PART A (10 x 2 = 20 Marks)**

1. Give the mechanism of enzymatic desizing.
2. Give the chemical effect of oxidizing agent on the cellulosic material.
3. State the first law of Thermodynamics.
4. Define: Free energy.
5. What is the role of crystallinity of fibre on dye uptake?
6. What is equilibrium of sorption?
7. What are intermolecular forces?
8. What is fick's law?
9. What is 2° and 10° observer in computer color matching?
10. Give the colour difference equation.

PART B (5 x 16 = 80 Marks)

11. a) Explain the chemical properties of wool and cotton with respect to chemical structure of textile fibers.

(OR)

- b) Discuss in detail about the mechanism of scouring and mechanism of mercerizing of cotton fabric.

12. a) Discuss in detail heat of dyeing and entropy.

(OR)

- b) Discuss in detail about the concept of Donar membrane equilibrium.

13. a) Discuss the effect of orientation , crystallinity and chemical structure on dye take- up.

(OR)

- b) Explain different dye-fibre bonds with examples.

14. a) Discuss the parameters that affect diffusion and rate of dyeing

(OR)

- b) Explain fick's law of diffusion in detail.

15. a) Explain Instrumental colour measurement with example.

(OR)

- b) Discuss the principle of visual colour assessment and its colour quality standards.
