Reg. No. : | | | | | | | | | | |

J 3437

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2009.

Fourth Semester

Textile Technology

TT 1251 — CHEMISTRY FOR TEXTILES

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Outline the structure of starch.

2. Name the derivatives of cellulose, with the quality of textile fibre.

3. How oil is differed from fat?

4. Enlist the tests used for protein.

5. Justify, whether hydrogen peroxide is oxidative or reductive bleaching agent.

6. Enumerate the important derivatives of pyrrole.

7. Mention on the light absorption properties of dyes.

8. Comment on the methods of extraction of natural dyes.

9. Show, how a dye is interacted with polymer suitably?

10. Define time of half - dyeing.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the possible reactions of cellulose, based on its structural aspects.

Or

(b) Which textiles contain lignin as major ingredient? Explain the delignification process of lignocellulose. (4 + 12)

12. (a) Write the chemical composition of silk and its chemical properties. (4 + 12)

Or

(b) Name the important impurities present in wool. Explain how they are removed chemically. (4 + 12)

13. (a) Explain the furan and pyridine with their derivatives. (8 + 8)

Or

(b) Comment on the similarities and differences between sodium hypochlorite and hydrogen peroxide bleaching. (8 + 8)

14. (a) Give a detailed note on classification of dyes and intermediates. (10 + 6)

Or

(b) Explain the spectrophotometric method of estimation of a dye in detail.

15. (a) Elaborate the thermodynamics and kinetics of dyeing. (8 + 8)

Or

(b) Show the difference between adsorption and absorption. Explain various adsorption isotherms in dyeing and their importance. (4 + 12)

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