Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐

R 3632

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

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.   Why starch is not considered as a Textile polymer?

2.   Show the structure of Lignin.

3.   What proteins are present in silk?

4.   How fatty materials are removed from cotton?

5.   List out the types of oxidising bleaching agent.

6.   Give the derivatives of furan.

7.   What are cationic dyes?

8.   Write the chemistry of fluorescent brightening agents.

9.   What is thermodynamics of dyeing?

10. Write on time of half-dyeing briefly.

PART B — (5 × 16 = 80 marks)

11. (a) What are the differences in the properties of Starch and Cellulose? Give the structure of cellulose suitable for textile polymer. (8 + 8)

Or

(b) List out the important regenerated cellulosic fibres. Describe the production of important commercial regenerated cellulosic fibre. (4 + 12)

12. (a) Write the chemical composition of wool. Elaborate the structural aspects of wool fibre. (6 + 10)

Or

(b) Write about analysis of oil. Explain the mechanism of removal of oil from grey textiles. (4 + 12)

13. (a) Give the basic concept of oxidative bleaching. Justify the working mechanism of sodium hypochlorite as oxidative bleaching agent. (6 + 10)

Or

(b) List out the important reductive type of bleaching agents. Explain, how they are used as bleaching agents? What are the drawbacks of them? (4 + 8 + 4)

14. (a) Write about Beer-Lambert's law. Explain the light absorption properties of dyes. (6 + 10)

Or

(b) What are the important intermediates suitable for dye preparation? Show how indigoid dye is produced. (6 + 10)

15. (a) Provide the basic concept of polymer-dye interaction. Explain the thermodynamic derivations associated with adsorption isotherms in dyeing. (6 + 10)

Or

(b) Define equilibrium adsorption. Explain the influence of temperature on dye diffusion. (6 + 10)

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B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Fourth Semester

Textile Technology

TT 1252 — ELECTRONICS AND INSTRUMENTATION

(Common to Textile Technology (Textile Chemistry))

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   Write two characteristics of an ideal OPAMP.

2.   Write two properties of the material with which a semiconductor diode is fabricated.

3.   What is the difference between a decoder and a demultiplexer.

4.   How does an asynchronous counter differ from synchronous counter?

5.   Mention two applications of bridge circuits.

6.   Define sensitivity of an instrument.

7.   What are the types of thermoelectric sensors?

8.   What is the purpose of a strain gauge?

9.   Draw the characteristics of a triac?

10. Write two advantages of digital meters over analog meters.