

E 341

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2008

Fifth Semester

Textile Technology

TT 339 — CHEMICAL PROCESSING OF TEXTILE MATERIALS — I

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write the chemical composition of typical cotton fibre.
2. Briefly write about the chemical constitution of wool fibre.
3. Show the stages of hydrolysis of starch in desizing.
4. "Well boiled is half bleached" — Justify briefly.
5. List out the parameters influencing uniform bleaching.
6. State the importance of washing process.
7. Indicate the design features of chain type cloth mercerizing machine.
8. List out the factors influencing the drying performance of a stentering machine.
9. How do you identify polyester fibre by chemical tests?
10. How do you estimate cotton/wool blend proportion?

PART B — (5 × 16 = 80 marks)

11. Explain the different methods of identification of textile fibres in detail.

12. (a) Compare rot steeping, acid steeping and enzymatic desizing methods with respect to technical and economical aspects.

Or

- (b) What is gas singeing? Explain it with a neat sketch. Also mention the safety precautions to be considered in gas singeing operation.

13. (a) A wet processing industry receives an order for dyed cotton pant material. Explain the processes involved in the production of such fabric from grey stage using a flow chart.

Or

- (b) How do you improve tensile strength of cotton fabric by chemical treatment? Explain it with relevant sketches. (Note : The fabric is kept under tension during processing).

14. (a) Write about the working of kier and padding mangle with necessary sketches.

Or

- (b) Give a detailed note on hydroextractors and stretching devices.

15. (a) Explain the chemical structure of silk and enumerate its chemical properties.

Or

- (b) Outline the chemical structure and enumerate the chemical properties of Nylon 6 and Nylon 6, 6 fibres.