

N 1120

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2004.

Sixth Semester

Textile Technology

TT 343 — QUALITY ASSESSMENT OF TEXTILES

(Common to Textile Chemistry)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the reasons for textile testing?
2. List out the properties of normal distribution curve.
3. State the use of incorporating computers in the testing instruments.
4. What are the statistical tools available to assess the fabric characteristics which are not easily described by a number?
5. What do you mean by Fiber Fineness?
6. What are the fiber parameters can be possible to measure in High volume instruments?
7. Why correction is necessary for the count-strength product of cotton yarn?
8. What is limit irregularity for cotton yarn?
9. List out the various fabric properties essential for maintaining thermal comfort.
10. How many fabric testing methods are involved in Fabric Assurance by Simple Testing (FAST) system?

PART B — (5 × 16 = 80 marks)

11. (i) Write briefly, the standardisation of testing textile materials. (8)
- (ii) Explain in detail the role of design of experiments procedure. (8)

12. (a) Define the term span length. State the various methods used for measuring the length of fibers. Explain the working of digital fibrograph with a line sketch. (16)

Or

- (b) Enumerate the necessity of measuring trash content in cotton. Explain the principle of assessing trash content by using spin-lab, high volume instrument. (16)
13. (a) State the significance of fibre strength. Describe the methods employed for measuring fibre strength. What do you mean by pressley index? Explain the working of pressley bundle fiber strength tester. (16)

Or

- (b) Define the terms moisture content and moisture regain. Explain the effect of moisture content on electrical and mechanical properties of fibers. How will you control testing room atmosphere? (16)
14. (a) Give an account of measuring sliver count and its variation. How will you control the short-term variation of drawing sliver? What could be the effect of short-term drawing sliver variation on subsequent process?

Or

- (b) State the significance of count-strength product value. Distinguish between the constant rate of elongation and constant rate of loading. Describe the working of Lea tester. What is the role of analysis of variance test on lea test values? (16)
15. (a) Explain the importance of measuring bursting strength of fabric. What type of fabrics, bursting strength and tensile strength measurement are necessary? Explain in detail the instruments used to assess the bursting strength. (16)

Or

- (b) What do you mean by low stress mechanical properties? Plot a load-extension reference curve of KES-F and derive the values of tensile energy, (WT) Linearity (LT) and Resilience (RT).