

A 1493

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Sixth Semester

Textile Chemistry

TT 343 — QUALITY ASSESSMENT OF TEXTILES

(Common to Textile Technology)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the objectives of textile testing?
2. Distinguish between on-line and offline testing.
3. Two yarns each of 32' count were tested for lea strength and the results of 30 tests were taken. $n_1 = 30, \bar{x}_1 = 58, SD_1 = 7.8, n_2 = 30, \bar{x}_2 = 65, SD_2 = 8.2$. Is there a real difference between the lea strengths?
4. What are the factors to be considered in selecting a fabric sample for tensile testing?
5. Give the formula for estimating the cotton fibre maturity.
6. Explain the principle of fibre sorter in length measurements.
7. What is the effect of measuring length of a parallel plate capacitor on the evenness test result?
8. What is the effect of fibre length on yarn hairiness?
9. List the fabric characteristics determining comfort.
10. What is the difference between objective and subjective evaluation?

PART B — (5 × 16 = 80 marks)

11. (a) Discuss in detail the principle of working of various on line testing techniques adopted in fibre processing.

Or

- (b) Explain various quality control charts and their role in quality control.
12. (a) Explain the concept of Box and Behnkhen experimental design with an example.

Or

- (b) What is AQL? Explain the same with an example.
13. (a) What is the practical significance of length characteristics? Explain the principle of working of digital fibro graph.

Or

- (b) What is moisture content and moisture regain? Explain the principle of working of Shirley moisture meter.
14. (a) What is evenness? Enlist the characteristic features of momentary variations chart, spectrogram and V-L curve.

Or

- (b) What is CRT, CRE and CRL principles of tensile testing? Explain the working procedure of an electronic tensile tester.
15. (a) What is fabric handle? Explain the principle of working of KES-F bending and shear testers.

Or

- (b) What is fabric drapeability and fit of a garment? Explain the principle of measurement of drape and the influence of fit on comfort of a garment.