

C 3249

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

Fifth Semester

Textile Technology (Fashion Technology)

FT 1305 — TESTING AND QUALITY CONTROL OF TEXTILES AND APPARELS

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How will you select 100 Ring bobbins in a population of 25,000 spindles for testing count variation?
2. What is the significance of singeing process in the yarn stage?
3. How will you calibrate analytical balance?
4. State the principle of measuring yarn unevenness and yarn imperfection.
5. State the principle of measuring fabric tearing strength.
6. What is pilling of fabric?
7. Distinguish between crease resistance and crease recovery of a fabric.
8. How will you assess colour fastness of a fabric?
9. List out the various quality factors to be considered in the sewing department.
10. State the mechanism of cotton fabric shrinkage.

PART B — (5 × 16 = 80 marks)

11. (a) Why selvages are to be avoided while sampling for fabric testing? Explain the method of sampling fabrics for tensile, bursting and tear strength properties.

Or

- (b) How, the yarn tension calculated in twist measurements? Explain the untwist-twist method of estimating single yarn twist.

12. (a) What is corrected lea strength? Explain the working principle of Lea Tester. State the errors associated in the lea Tester.

Or

- (b) What are the different measures of mass variation? How, will you measure mass variation in the yarn based on capacitance principle? Describe the working principle of an instrument.
13. (a) Highlight the causes of cloth tear. Explain the effect of weave and structure on tear strength. How will you measure the tearing strength of a fabric?

Or

- (b) Define "Serviceability" of a fabric. How will you determine the abrasion resistance of fabric? Explain the usefulness of this test.
14. (a) Relate bending length and drapability. Describe the working of drape meter. What are the factors influencing drape ability?

Or

- (b) What are the factors affecting water permeability? Explain any one method of measuring water permeability. What do you understand by the term "water proof breathable fabric"?
15. (a) What are the possible causes of seam failure? Discuss in detail, the various factors of controllable quality in sewing department.

Or

- (b) State the role of moisture on dimensional stability of fabrics made by cotton fiber. Explain the mechanism of shrinkage of cotton knitted fabric due to swelling.
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