B.TECH. DEGREE EXAMINATIONS: NOVEMBER 2009

Fifth Semester

TEXTILE TECHNOLOGY

U07TT506: Textile Quality Evaluation

Time: Three Hours **Maximum Marks: 100**

Answer ALL the Questions:-

PART A (10 x 1 = 10 Marks)

1. Schwart's chart is also known as ----

    a) specification chart   b) control chart c) performance chart d) bar chart

2. Which one of the following statements is incorrect with reference to quality assurance?

    a) Quality assurance is not inspection

    b) Quality assurance is not super checking activity

    c) Quality assurance is a major cost area

    d) Quality assurance is not panacea for all ills

3. American staple length = ---------- x Effective length

    a) 0.71   b) 0.81   c) 0.91   d) 0.61

4. Colour value in HVI is measured using ----

    a) Whiteness index only   b) Yellowness index only

    c) Reflectance only   d) Both reflectance and yellowness

5. Tex = 590.5 / x

    a) x = denier   b) x = tex   c) x = Ne   d) x = Nm

6. Twist is defined as

    a) Rotation about yarn axis   b) Rotation about fibre axis

    c) Rotation about an imaginary axis   d) Rotation about both fibre and yarn axis

7. Tear strength, using ballistic tester, is expressed in terms of

    a) inch   b) pounds   c) inch-pounds   d) Newton.meter

8. Select the important property of the fabrics that decides handle value

    a) stiffness   b) pilling   c) repellency   d) retardancy

9. Which one of the following does not belong to 'closures'?

    a) buttons   b) zippers   c) appliqués   d) hooks

10. The sample size used for the measurement of seam slippage of a fabric is --- (mm x mm)

    a) 50 x 50   b) 100 x 100 c) 200 x 100   d) 200 x 200

PART B (10 x 2 = 20 Marks)

11. Distinguish between quality control and quality assurance.

12. What are the two different aspects of quality?

13. List various fibre properties that can be measured using high volume instruments.

14. Distinguish between staple length and effective length in fibre length measurement.

15. Distinguish the faults assessed using the unevenness tester and yarn imperfection detectors.

16. State the significances of yarn hairiness.

17. What are the various consumer significant fastness properties?

18. What are the methods used for expressing the results of abrasion resistance test?

19. List various types of zippers used in the textile materials.

20. State the possible causes for seam failure.

PART C (5 x 14 = 70 Marks)

21(a) (i) Explain various factors that influence the quality.

    (ii) Give various definitions of quality.

(OR)

  (b) The single yarn strength (g) values of 10 samples each of size 5 are given in the table below. Calculate the control limits for mean and range of yarn strength and construct the control charts using the same data.

134	132	133	128	135	131	132	133	134	130
130	130	127	126	133	129	129	130	132	128
128	127	125	124	128	127	126	126	128	125
126	124	122	120	125	123	123	124	125	122
120	121	118	118	123	120	120	120	130	118

22 (a) i) How do you measure

      1) maximum length   2) effective length   3) SFC

      4) quartile range and   5) dispersion using a comb sorter diagram.

   (ii) Give salient features of AFIS.

(OR)

  (b) i) Explain the method of measuring bundle fibre strength using stelometer.

    ii) List various factors that influence the results of tensile properties.

23 (a) With a sample diagram, explain the method of analyzing seldom occurring faults in the yarn.

(OR)

(b) Explain the working principle of an electronic unevenness tester and the interpretation of data for calculation of index of irregularity.

24 (a) Write short notes on evaluation method of

i) air permeability   ii) drape

(OR)

(b) Write short notes on evaluation method of

i) tear strength   ii) pilling

25 (a) Explain the method of measuring seam strength using fixed load method.

(OR)

(b) Explain the method of testing methods of fusible, non fusible interlinings.

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