

B.TECH DEGREE EXAMINATIONS: APRIL/MAY 2014

(Regulation 2009)

Fifth Semester

TEXTILE TECHNOLOGY

TTX111: Textile Quality Evaluation

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Principle is used for measuring fibre length in Almeter.
 - a) Air flow
 - b) Optical method
 - c) Mechanical
 - d) Capacitance
2. The principle of arealometer instrument is analogous to that of the
 - a) Air flow
 - b) Wheatstone bridge
 - c) CTT
 - d) CRT
3. Circularity is a measure of
 - a) Fibre diameter
 - b) Fibre maturity
 - c) Fibre fineness
 - d) Fibre rigidity
4. The yellowness of cotton fibre is measured by means of
 - a) Reflectance value
 - b) Nickerson-Hunter cotton colour chart
 - c) Greatness value
 - d) Yellowness value
5. Short fibre index is an indication of
 - a) Uniformity ratio of yarn
 - b) Floating fibres in the drafting zone
 - c) Parallel fibres in the drafting zone of spinning machinery
 - d) Difference between fibre length and span length
6. Find out the instrument used to measure the thickness of a strand under compression
 - a) WIRA roving levelness tester
 - b) Uster evenness tester
 - c) Field-walker evenness tester
 - d) LINRA tester
7. ANOVA is a systematic procedure to compare
 - a) Mean values
 - b) SD
 - c) Variations
 - d) CV%
8. Randomised block design is widely used to
 - a) Determine the difference in sample
 - b) Determine the difference in productivity of different makes of machines

- c) Determine the variance in two samples
 - d) Calculate the standard error
9. AFIS can be used to measure
 - a) effective length
 - b) Yellow ness
 - c) 2.5 % span length
 - d) mean length
 10. The energy required to break the specimen is known as
 - a) Tensile strength
 - b) Tenacity
 - c) Breaking strength
 - d) Work of rupture

PART B (10 x 2 = 20 Marks)

11. Differentiate between Accuracy and Precision.
12. What are sampling methods?
13. List the properties measured in AFIS instrument.
14. How to test the maturity of cotton fibres?
15. Write the principle involved in Hairiness tester.
16. How are yarn faults classified in classimat system?
17. What do you meant by drape? How is it calculated?
18. How do you test the sewability?
19. Distinguish between linings and interlinings.
20. How to assess the seam durability?

PART C (5 x 14 = 70 Marks)

21. a) (i) Describe the factors influencing the yarn quality. (7)
(ii) Discuss the importance of calibration of textile instruments. (7)
(OR)
b) (i) Briefly discuss the sampling methods for fibres and merits and demerits. (7)
(ii) Explain the application of 'F' and 't' test for analyzing the test data. (7)
22. a) (i) Explain the working of fibro graph with suitable diagram. (7)
(ii) Discuss the colour module and maturity module in high volume instrument. (7)
(OR)
b) (i) Describe the working principle of AFIS instruments and interpret the data with suitable example. (10)
(ii) Derive the relationship between moisture content and moisture regain of fibres. (4)
23. a) (i) Explain the working of instron instrument with a neat diagram. (10)

(ii) Distinguish between CRT and CRL. (4)

(OR)

b) (i) Describe the factors influencing the tensile testing of yarns. (7)

(ii) Discuss the Constant Tension Transport instrument and its features. (7)

24. a) (i) Describe the testing procedure of dimension stability of fabrics. (7)

(ii) Discuss the testing procedure of water repellency of textile materials. (7)

(OR)

b) (i) Explain the working principle of abrasion tester with suitable diagram. (7)

(ii) Discuss the FAST system and its merits. (7)

25. a) (i) Describe the testing procedure of quality of zippers and hooks. (7)

(ii) Discuss the characteristic requirements of accessories of garments. (7)

(OR)

b) (i) Discuss the AQL and its importance in garment industry. (7)

(ii) Explain the testing procedure of quality of sewing threads. (7)
