Register Number: ………………..

B.TECH DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2009)

Second Semester

TEXTILE TECHNOLOGY

TTX101: Textile Fibers

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Mean angle between the chain molecules and fibre axis is termed as _____.

   a) Degree of order   b) Slenderness ratio

   c) Degree of localization   d) Degree of orientation

2. Moisture content of cotton is _____ %.

   a) 1 to 2   b) 12 to 15

   c) 7 to 8   d) 20 to 25

3. Swelling of _____ fibre is more in water when compared with the other fibres given below.

   a) Wool   b) Polyester

   c) Silk   d) Polynosic

4. _____ variety of cotton have a low modulus shows less elasticity from a given stress.

   a) Coarse   b) Super fine

   c) Fine   d) Extra long staple

5. Example for regenerated cellulose fibre is _____.

   a) Flax   b) Silk

   c) Viscose rayon   d) Wool

6. _____ fibre got more inter fibre friction.

   a) Kemp   b) Jute

   c) Ardil   d) Wool

7. _____ fibre produce more static electricity.

   a) Jute   b) Cotton

   c) Polyester   d) Flax

8. Nylon is _____ resistant to acids.

   a) Less   b) Moderate

   c) More   d) Very high

9. The cross section raw cotton fibre is in _____ shape.

   a) Circular   b) Kidney

   c) Waver   d) Serrated

10. _____ fibre is more elastic in nature.

   a) Cotton   b) Jute

   c) Wool   d) Lycra

PART B (10 x 2 = 20 Marks)

11. Recall the importance of crystallinity in fibres.

12. List the desirable properties of fibre.

13. Summarize the cultivation of flax fibre.

14. Give any four physical properties of banana fibre.

15. Mention the disadvantages of man-made fibres.

16. Give the raw material to produce Tencel fibre.

17. Name any four specialty fibre.

18. Why polyester fibre is of more lustrous than cotton fibre?

19. Tell the applications of polyurethane fibre.

20. List the characteristic of PVC fibre.

PART C (5 x 14 = 70 Marks)

21. a) i) List the essential properties of apparel grade and technical grade textile fibres. (7)

       ii) Classify textile fibres. (7)

(OR)

   b) i) Outline the requirements of fibre formation. (4)

       ii) Explain the following terminologies related to fibre: i) molecular weight (10)
ii) degree of polymerization iii) orientation

22. a) Explain any one of the hair based fibre and its varieties. (7)

       List the physical and chemical properties of cotton fibre. (7)

(OR)

   b) i) Elaborate on types and grading of wool. (7)

       ii) Explain the physical and chemical properties of wool. (7)

23. a) Describe the manufacturing techniques of casein fibre and its applications.

(OR)

b) Explain the manufacturing process of high wet modulus fibre and its physical properties.

24. a) With neat sketch explain the production sequence and chemical properties of polyester fibres

(OR)

b) With neat sketch explain the production sequence and physical properties of Nylon 6 fibres.

25. a) i) Elaborate on the characteristic of carbon fibre and its applications (7)
   ii) Explain the physical and chemical properties of glass fibre. (7)

(OR)

b) Describe the procedure for identification of textile fibres by microscopic test and solubility test.

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