

**B.TECH. DEGREE EXAMINATIONS: JUNE 2010**

Second Semester

**TEXTILE TECHNOLOGY**

TTX101: Textile Fibre

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. The length: Breadth (L/B) ratio of a textile fibre is  
a) 100:1      b) 100:1      c) 1:100      d) 1:1000
2. Cotton is a ----- fibre  
a) Multi cellular      b) Bi cellular      c) Tri cellular      d) uni cellular
3. The monomer for acrylic fibre is ----  
a) Acrylic acid      b) Acrylic nitrile      c) Nitrale acetate      d) cupramonium
4. Dowtherm process uses a combination of ----- gases for heating  
a) Biphenyl and bi phenyl oxide      b) Carbondi oxide and carbon monoxide  
c) O oxygen and nitrogen      d)Oxygen and carbon monoxide
5. --- fibre soluble in water  
a) PVA      b) Polyester      c) acrylic      d) carbon
6. The cross section of mercerized cotton is ----  
a) circular      b) oval      c) bean shape      d) rectangular
7. Modacrylic has----- % of other copolymer.  
a) 15-65%,      b) 30-45%      c) 50%      d) 80-90%
8. ----- is a fibre generated from milk protein.  
a) ardil      b) vicara      c) casein      d) polynosic
9. The no of acetate groups per cellobiose unit in case of primary acetate is -----  
a) 4      b)6      c) 2      d) 5
10. The degree of polymerization in the case of viscose fibres is -----.  
a)175-250      b)1000-2000      c) 1500-2500      d) 3000-4000.

**PART B (10 x 2 = 20 Marks)**

11. Differentiate between the terms the staple fibre and continuous filament
12. What is polymerization?

13. Give two physical properties of wool.
14. What is spider silk? Give any two physical properties.
15. State the four types of popular man made fibres.
16. Define the term tencel fibre.
17. Give the molecular formula for Nylon 66 and Nylon 6.10
18. What is LOY and POY?
19. Explain Lycra fibre.
20. Give any two properties and application of Kevlar fibre.

**PART C (5 x 14 = 70 Marks)**

21. a) (i) Classify the textile fibre according to their origin in detail. (7)
- (ii) Give a detailed account on the basic fibre properties for their textile applications (7)

**(OR)**

- b) Explain about different polymerization mechanism in detail.

22. a) With neat sketch write about the structure and properties of wool.

**(OR)**

- b) With neat sketch write about the baanan fibre and their properties.

23. a) What are the side reaction and degradation products during polyester production.

**(OR)**

- b) What are the different roots of preparing polyester and also discuss the benefits of TPA method.

24. a) With neat flow chart explain the manufacture of Nylon 6 under the continuous polymerization technique.

**(OR)**

- b) Explain in detail the production of Kevlar fibre.

25. a) What are the properties and application of glass and carbon fibres.

**(OR)**

- b) Explain in detail the manufacturing of polyurethane fibres.

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