

Register No:

B.TECH. DEGREE EXAMINATIONS: MAY / JUNE 2011

Second Semester

TEXTILE TECHNOLOGY

TTX101: Textile Fibers

Time: Three hours

Maximum Marks: 100

Answer ALL Questions

PART A (10x1 = 10 Marks)

1. The degree of polymerization of cotton is
a) 50 b) 500 c) 5000 d) 1000
2. Which of the following is the technical grade textile fibre
a) cotton b) Silk c) Nomex d) Jute
3. Banana fibre is extracted from the following part of plantain tree
a) Bark b) Leaf c) Fruit d) Flower
4. Polymer of wool fibre is having the following structure
a) Ring b) Helical c) Folded d) Unicellular
5. The one of the following is a thermoplastic fibre
a) Acetate Rayon b) Viscose rayon c) Cuprammonium Rayon d) None
6. Sodium Xanthate is relevant to
a) Acetate Rayon b) Viscose rayon c) Cuprammonium Rayon d) None
7. The melting point of PET fibre is _____
a) 2000° C b) 200° C c) 260° C d) 20° C
8. Which one of the following is called polyolefin fibre?
a) Polypropylene b) Nylon 6 c) Nylon 6.6. d) Polyester
9. Lycra fibre is a _____
a) Elastomeric b) Synthetic c) Polyurethane based d) All are true
10. Nylon is dissolved in
a) Formic acid b) Sulphuric acid c) Sodium Hydroxide d) Water

PART B (10x2=10 Marks)

11. What is the importance of polymer orientation with respect to textile fibre?

12. Classify textile fibres.
13. How does the jute react with strong alkali and strong acid under atmospheric conditions?
14. Pen down few properties of spider silk.
15. What is Tencel fibre?
16. Name any two regenerated protein fibres.
17. Write the name of two raw materials used for production Nylon 6.6.
18. What are the applications of acrylic fibre?
19. Why the Glass fibre is used as part of false ceiling material?
20. What is PVC fibre?

PART C (5x14=70 Marks)

21. a) Write in detail about essential and desirable properties of apparel grade textile fibres.

(OR)

- b) Elaborate on the basic requirements of fibre formation.

22. a) Pen down in detail about the physical properties of the following

(i) Cotton (7)

(ii) Linen (7)

(OR)

- b) Explain the chemical properties of

(i) Wool (7)

(ii) Silk (7)

23. a) Elaborate on the general principles of manufacturing of man-made fibres with suitable diagrams.

(OR)

- b) How the viscose rayon is manufactured through industrial production?

24. a) (i) Pen down suitably about the manufacturing of Nylon 6. (10)

(ii) What are all the end uses of Kevlar fibres? (4)

(OR)

b) Write in detail about the physical properties of

(i) Polyester (5)

(ii) Acrylic (5)

(iii) Polypropylene (4)

25. a) Elaborate on the basic properties and applications of the below fibres

(i) Carbon (7)

(ii) Polyurethane (7)

(OR)

b) Write in detail about the identification of textile fibres through various test methods?
