KUMARAGURU
college of technology
character is life

Register Number: ……

B.TECH. DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2013)

Second Semester

TEXTILE TECHNOLOGY

U13TXT201: Textile Fibers

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Sisal is a _____
   a) fruit fibre. b) Bast fibre
   c) leaf fibre d) Animal fibre
2. The length: Breadth (L/B) ratio of a textile fibre is
3. Cotton is a ------ fibre
   a) Multi cellular b) Tri cellular
   c) Bi cellular d) uni cellular
4. Inner cylindrical void in cotton fibre is known as _____
5. The degree of polymerization in the case of viscose fibres is _____
   a) 1000-2000. b) 1500-2500.
   c) 175-250 d) 3000-4000.
6. _____ is a fibre generated from milk protein.
7. The monomer for acrylic fibre is _____
   a) Acrylic acid b) Acrylonitrile
   c) Nitrale acetate d) cupramonium
8. Melting temperature of the polyester is _____
9. The cross section of mercerized cotton is _____
   a) circular b) oval
   c) rectangular d) bean shape
10. _____ fibre has triangular cross-section with rounded corners.

PART B (10 x 2 = 20 Marks)

(Not more than 40 words)

11. What are the essential characteristics of fibre forming polymers?
12. Compare thermoplastic and thermoset materials.
13. What are the factors to be considered in wool grading?
14. Why is the silk fibre more lustrous?
15. Why is viscose rayon called regenerated fibre?
16. State the applications of soyabean fibre.
17. Compare Low Density Polyethylene (LDPE) and High Density Polyethylene (HDPE).
18. Give the molecular formula for PVC and PAN.
19. List the different applications of glass fibre.
20. Write the molecular formula and monomers of Polyurethane.

PART C (5 x 14 = 70 Marks)

(Not more than 400 words)

Q.No. 21 is Compulsory

21. Discuss in detail the essential and desirable properties of textile fibres.

22. a) Give detailed scientific account on how wool is suitable for outer wear in cold counties. Include in your discussion the role of morphological structure of wool also.

(OR)

b) Illustrate and explain the morphological and chemical structure of cotton with suitable diagrams.

23. a) Elaborate on the production process of viscose rayon with suitable diagrams.

(OR)

b) Explain the chemical properties and applications of casein and soya bean fibre.

24. a) Enumerate the various steps of manufacturing polyester using DMT route.

(OR)

b) Enumerate the various steps involved in manufacturing of Nylon 66 polymer.

25. a) Elaborate on the properties and application of Glass and Carbon fibres.

(OR)

b) Illustrate with rough diagrams the method of identification of any two textile fibres by microscopic and solubility method.

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