KUMARAGURU
college of technology
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Register Number: …….

B.TECH DEGREE EXAMINATIONS: DEC 2014

(Regulation 2013)

Second Semester

TEXTILE TECHNOLOGY

U13TXT201: Textile Fibres

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Jute is a_____
   a) fruit fibre. b) Bast fibre
   c) leaf fibre d) Animal fibre
2. The approximate length: Breadth (L/B) ratio of a textile fibre is_____
3. The wool fibre consists of _____ on its surface.
   a) Convolutions b) Scales
   c) Folds d) Striations
4. Inner cylindrical void in cotton fibre is known as_____
5. Raw material for viscose rayon production is _____
   a) starch b) wood pulp
   c) caprolactum d) milk
6. Stoichiometric ratio of Hexamethylene Diamine and Adipic Acid used in AH salt preparation is _____
7. Modacrylic has _____ % of other copolymer.
   a) 30-45 b) 15-65,
   c) 50 d) 80-90
8. The density of polyester is_____g/cc
9. _____ is a fibre generated from milk protein.
   a) Vicara b) Ardil
   c) Casein d) Polynosic
10. _____ is a elastomeric fibre

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. List the different types of silk.
15. Why viscose rayon is called as 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 Nylon 66 and Nylon 6.
19. List the different applications of PVA fibre.
20. Write the molecular formula of PVC and 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) Explain the structure and properties of cotton fibre.

(OR)

b) (i) Illustrate the morphological and chemical structure of silk with suitable diagrams. (8)

(ii) Outline the production process of silk with necessary sketches. (6)

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

(OR)

b) (i) Explain the production of high wet modulus viscose rayon. (7)

(ii) Discuss the properties and applications of caesin fibre. (7)

24. a) (i) Enumerate the various steps of manufacturing of polyester using TPA method. (8)

(ii) Compare and contrast the various manufacturing methods of polyester. (6)

(OR)

b) (i) Discuss the physical and chemical properties of polyethylene and its applications. (10)

(ii) Elaborate the raw materials used for the production of acrylic and modacrylic fibres production (4)

25. a) (i) Discuss the physical properties and applications of aramid fibre. (7)

(ii) Discuss the physical properties and applications of carbon fibre. (7)

(OR)

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

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