KUMARAGURU
college of technology
character is life

Register Number:……..

B.TECH DEGREE EXAMINATIONS: MAY 2015

(Regulation 2013)

Third Semester

TEXTILE TECHNOLOGY

U13TXT301: Manufactured Fibre Technology

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Manufactured fibres are highly_____.
   a) Isotropic b) Anisotropic
   c) Orthotropic d) Partial tropic
2. T_g refers to _____ .
3. _____ is a regenerated fibre having serrated fibre cross section.
   a) Acetate rayon b) Cuprammonium rayon
   c) Polyester d) Viscose Rayon
4. _____ fibre possess keratin as a main content.
5. Water is used as catalyst in _____ polymerization process.
   a) Nylon 66 b) Nylon 6
   c) Polyester d) Polypropylene
6. Nylon 6 filaments are produced through _____ spinning process.
7. _____fibre has excellent fibre bulkiness.
   a) Polypropylene b) Polyethylene
   c) Acrylic d) Cellulose acetate
8. _____ fibre has less density than water and used in many applications.
9. Delustring is done to _____.
   a) Increase luster b) Maintain luster
   c) Decrease luster d) Eliminate luster
10. Heat setting process enhances the _____ of manufactured fibres.

PART B (10 x 2 = 20 Marks)

(Not more than 40 words)

11. State the importance of crystallinity in fibres.
12. List the components used for spinning process.
13. What do you understand by bi-component fibre?
14. What is super absorbent fibre?
15. Differentiate Nylon 6 and Nylon 66.
16. List the applications of polypropylene fibre.
17. Define: Moda acrylic fibre.
18. Write about TGA.
19. Mention the additives used in fibre manufacturing.
20. Why spin finish is given to the filament?

PART C (5 x 14 = 70 Marks)

(Not more than 400 words)

Q.No. 21 is Compulsory

21. With a neat sketch, elaborate the fluid flow behaviour of polymers and its significance.

22. a) Explain the manufacturing process of viscose rayon with illustration.

(OR)

b) Outline the manufacturing process of soya bean fibre with a suitable diagram

23. a) Explain the manufacturing process of Polyester through DMT route with appropriate sketch.

(OR)

b) Explain any one of the manufacturing technique of polyolefin fibres.

24. a) Briefly explain the production, properties and applications of elastomeric fibres.

(OR)

b) Elaborate on the characterization techniques of acrylic fibres.

25. a) Define the term false twist texturing process. Explain various factors which determine the efficiency of false twist texturing process.

(OR)

b) Define heat setting and drawing phenomenon. With the help of graphs, describe various structural and property changes taking place in synthetic fibres as a result of drawing and heat setting.

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