

B.TECH., DEGREE EXAMINATIONS: APRIL/MAY 2014

(Regulation 2009)

Sixth Semester

TEXTILE TECHNOLOGY

TTX202: Texturizing Technology

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (10x1=10 Marks)

1. To reduce the low thermal loss, spin finish should have –
A. Low specific heat B. High specific heat
C. High heat of vaporization D. High dripping tendency
2. Texturizing is not essential for ----
A. Wool B. PET C. PA D. Acrylics
3. Heat setting results in ----
A. Lower crystallinity B. Higher crystallinity C. Higher loss in modulus D. Lower elasticity
4. Helanca process produces ----
A. Stretch Yarn B. Bulky Yarn C. Slub Yarn D. High Bulk Yarn
5. ---- fibres require longer dwell time in the heating zone during texturizing.
A. PET B. PP C. Acrylics D. Nylon
6. Which one of the following describes undrawn yarn?
A. Low Elongation B. High Shelf Life C. High Tenacity D. Low Shelf Life
7. High pressure of air jet in the air jet texturizing leads to
A. Low tenacity B. High tenacity
C. Initially low and then high tenacity D. Initially high and then low tenacity
8. Pressure range used in the air jet texturizing is --- psi.
A. 10 - 80 B. 100 - 120 C. 125 - 140 D. 0 - 10
9. Torque developed in the knit-de-knit texturized yarn is
A. Low B. High C. Zero D. Very high

10. In edge crimping, the contact angle should be ---- for high crimp values.
A. Low B. High C. Very High D. Medium

PART B (10 x 2 = 20 Marks)

11. List the demerits of flat yarns.
12. What are the problems associated with POY?
13. What is bulked yarn?
14. What are the two major processes carried out in Helanca process?
15. What are the methods by which false twist can be introduced during texturizing?
16. State the demerits of high speeds in false twist texturizing.
17. Recall the variables that influence air jet texturizing.
18. Differentiate the structure of yarn formed in air jet texturing and false texturizing.
19. What type of modification required in the heaters used in PP texturizing?
20. What are crinkled yarns?

PART C (5x 14 = 70 Marks)

21. a) Differentiate different types of texturized yarns and also list the needs for texturization.

(OR)

b) (i) List the problems associated with texturized yarns. (7)
(ii) What are the problems associated with flat yarns and how are they addressed in texturizing? (7)
22. a) (i) Explain the slack and taut heat setting process. (10)
(ii) Differentiate between temporary and permanent set. (4)

(OR)

b) How does heat setting alters structure and properties of fibres?
23. a) Explain false twist texturizing with a special focus on heating systems, thread line tension and post treatments.

(OR)

- b) (i) With a suitable diagram explain drawing and texturizing zones in draw-texturizing. (10)
- (ii) List down the advantages of draw texturizing. (4)

24. a) Explain the method of producing Taslan yarns.

(OR)

b) Explain various process variables involved in air jet texturizing and their influence on the texturizing efficiency.

25. a) How can we texturize the fibres using a stuffer box? Explain with suitable diagram.

(OR)

b) Explain edge crimping and gear crimping processes.
