Register Number……

B.TECH. DEGREE EXAMINATIONS: APRIL / MAY 2010

Fourth Semester

TEXTILE TECHNOLOGY

U07TT401: Yarn Manufacturing Technology II

Time: Three hours **Maximum Marks: 100**

Answer ALL the Questions:-

PART A (10 x 1 = 10 Marks)

1. In a flyframe, spindle top inserts with grooves are used to introduce
   A. real twist in the roving B. further draft in the roving
   C. false twist in the roving D. tension in the roving

2. The typical draft used in speed frame is_____

   A. 5-7 B. 8-14 C. 20-40 D. 80-120

3. The traveler speed in m/sec in ring frame is nearly --------

   A. 5 B. 45 C.105 D.150

4. In apron drafting the apron opening is effected by_____

   A. cradle B. spacer C. nose bar D. presser

5. Production speed of rotor spinning is nearly _____ mpm

   A. 40 B. 200 C. 300 D. 400

6. In rotor spinning the yarn tension is maximum
   A. at the yarn formation point B. at the navel
   C. at the withdrawal rolls D. in the radial portion of the yarn within the rotor

7. Out of the following, the technology that produces S & Z twists in the same yarn is

   A. Rotor spinning B. Wrap spinning C. Ring spinning D. Self twist spinning

8. DREF spinning is also called as

   A.friction spinning B.air jetspinning C.self twist spinning D.wrap spinning

9. Siro spinning is the process of producing doubled yarn. The basis of this process is

   A. Lubricating the fibers in the drafting zone

   B. Using false twister just after the lappet eye

   C. Drafting two roving together and twisting them into a single yarn

   D. Introducing a filament into the yarn at the front roller

10. If one yarn of 40 ^{s} Ne and two yarns of 20 ^{s} Ne are doubled together, the resultant count is_____

    A) 25 ^{s} Ne B) 16 ^{s} Ne C) 8 ^{s} Ne D) 5 ^{s} Ne

PART B (10 x 2 =20 Marks)

11. What are suspended flyers?
12. What are the objectives of speed frame?
13. Mention the limitations of ring spinning.
14. What is BCR?
15. Give the raw materials requirements for rotor spinning.
16. State the principles of friction spinning.
17. What is repco spinning?
18. Draw air jet yarn structure.
19. What are fancy yarns?
20. State the importance of assembly winder.

PART C (5 x 14 =70 Marks)

21. (a) With a neat sketch, explain the mechanism of roving formation in simplex.

(OR)

(b) Calculate the production in Kgs/shift of 8 hrs / simplex machine with the help of following data.

3/3 Drafting System:		No. of spindle/machine	= 120
Front zone draft	= 8.57	Spindle speed	= 1100 rpm
Back zone draft	= 1.41	Twist Multiplier	= 1.1
Hank of the feed sliver	= 0.12^{s} Ne	Efficiency	= 89%

22. (a) Explain about the functions and types of ring & traveler used in ring frame with a neat sketch.

(OR)

(b) With neat sketch explain the role of spindle in ring frame.

23. (a) Discuss the effect of various machine parameter on rotor yarn characteristics.

(OR)

(b) Explain the working features of DREF III spinning machine with neat sketch.

24. (a) Discuss the mechanism of yarn formation in air jet spinning.

(OR)

(b) Explain the working features of self twist spinning with neat sketch.

25. (a) Explain about the production of fancy yarns in doubling machine with neat sketch.

(OR)

(b) Explain the mechanism of yarn formation in two for one twister with neat sketch.

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