

**B.TECH DEGREE EXAMINATIONS: APRIL / MAY 2011**

Fourth Semester

**TEXTILE TECHNOLOGY**

U07TT401: Yarn Manufacturing Technology- II

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. In bobbin lead mechanism, the flyer speed during empty bobbin to full bobbin is \_\_\_\_\_  
a. Increasing      b. Decreasing      c. Constant      d. zero
2. Closer draft roller setting is preferred for \_\_\_\_\_ counts  
a. Coarser      b. Medium      c. Fine      d. Extra fine
3. The most important element in ring spinning for yarn formation is \_\_\_\_\_  
a. Front roller      b. Ring      c. Back roller      d. Traveler
4. The protruding fibres will be minimised by \_\_\_\_\_ the spinning triangle.  
a. Increasing      b. Minimizing      c. Controlling      d. Opening
5. Production speed of rotor spinning is nearly \_\_\_\_\_ mpm  
a. 19      b. 25      c. 100      d. 300
6. How many friction drums in DREF-3 Spinning system?  
a. 1      b. 2      c. 3      d. 4
7. 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
8. Which spinning system has double roving and single yarn manufacture?  
a. Bobtex      b. DREF      c. Rotor      d. Siro
9. For each revolution of spindle in TFO, how many twists will be inserted to the yarn?  
a. 1      b. 2      c. 3      d. 4
10. In a set of two (or) three coloured threads, each yarn is feed faster than the others to produce a -----  
(a) Slub yarn      (b) knob yarn      (c) boucle yarn      (d) spiral yarn

**PART B (10 x 2= 20 Marks)**

11. Differentiate: Bobbin lead & Flyer lead principle in roving frame.
12. State the functions of building mechanism of speed frame.
13. What are the different type of spindle drives used in ring frame?

14. What are the merits of ring spinning machine?
15. Write a note on “Minimum number of fibres in yarn cross section” for an open-end spinning system
16. Why the friction spinning machine has high twist insertion rate?
17. What do you mean by “Core-sheath” ratio?
18. Write down the process parameters of friction spinning
19. What is the principle of Self twist spinning?
20. What are fancy yarns?

**PART C (5 x 14= 70 Marks)**

21. a) (i) Explain the impact of roller pressure, apron spacing and roller setting on quality of roving in speed frame.

**(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 = 7.2 Spindle speed = 800 rpm

Back zone draft = 1.5 Twist Multiplier = 1.2

Hank of the feed sliver = 0.12s Ne Efficiency = 89%

22. a) Explain the process of yarn formation in compact spinning system

**(OR)**

- b) Describe the various type of flutes and roller cots used in ring spinning.

23. a) Discuss the merits and demerits of various spinning systems

**(OR)**

- b) List out the rotor yarn properties and it's various applications

24. a) Explain the mechanism of Murata Jet Spinning system

**(OR)**

- b) Explain the mechanism of Bobtex spinning system

25. a) Explain the various type and characteristics of fancy yarn.

**(OR)**

- b) Explain with neat sketch the working principle of TFO and its yarn properties.

\*\*\*\*\*