

B.TECH. DEGREE EXAMINATIONS: NOV/DEC 2010

Third Semester

TEXTILE TECHNOLOGY

TTX 103: Spinning Technology I

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (10 x 1 = 10 Marks)

1. In knife roller gin the setting between the leather roller and knife roller should be
 - (a) $\frac{1}{3}$ rd of diameter of the largest seed
 - (b) Thrice the diameter of the largest seed
 - (c) $\frac{1}{3}$ rd the diameter of the smallest seed
 - (d) Thrice the diameter of the smallest seed
2. Trash present in a raw cotton for fine and low variety?
 - (a) 3.0% & 6.0%
 - (b) 4.5% & 8.0%
 - (c) 5.0% & 2.0%
3. The weight in gram of one meter of cotton sliver normally lies between
 - (a) 0.5 to 1.0
 - (b) 1.0 to 2.0
 - (c) 2.5 to 4.0
 - (d) 6.5 to 10.0
4. Match the pairs
 - (a) Card
 - (a) hank
 - (b) Roving
 - (b) micronaire
 - (c) Fibre fineness
 - (c) flats
5. The purpose of using auto-leveler is to improve
 - (a) Fibre orientation in yarn
 - (b) Yarn count CV%
 - (c) Yarn strength
 - (d) Yarn fault
6. Long term variation of sliver wave length is
 - (a) Up to 25cm
 - (b) 25cm-2.5m
 - (c) 2.5-25m
 - (d) 25m-250m
7. Speed of modern comber
 - (a) 100 nips/min
 - (b) 200 nips/min
 - (c) 400 nips/min
 - (d) 800 nips/min
8. The length of lap feed per combing cycle in cotton combing is
 - (a) 1mm-3mm
 - (b) 4mm-6mm
 - (c) 7mm-9mm
 - (d) 10mm-12mm

9. Wrapping CV% of roving for cotton

- (a) 1.8-2.5 (b) 2.6-3.0 (c) 3.1-4.2 (d) 4.3-4.8

10. In a fly frame 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

PART B (10x2= 20 Marks)

11. Differentiate lint and linters?

12. Distinguish between opening and cleaning?

13. State the types of fibre hooks and their proportion in card sliver?

14. Why even number of passage between card and comber?

15. What are the objectives of the drawing process?

16. Calculate the draft in the draw frame when the feeding sliver hank is 0.12 Ne delivery sliver hank is 0.115 Ne, number of doubling is 8?

17. What is forward feeding and backward feeding in comber?

18. What is the fractionating efficiency in ultra modern high speed comber?

19. What are the objectives of speed frame?

20. What do you mean by a bobbin leading and flyer leading system in fly frame?

PART C (5x14= 70 Marks)

21. a) Explain in detail with neat sketch the principle and operation of saw ginning?
(OR)

b) What is BDT? Explain in detail blending machine under BDT principle.

22. a) with neat sketch, explain in detail various developments in carding machine?
(OR)

b) What is transfer coefficient and explain in detail?

23. a) Explain in detail any one of the modern drafting system used in draw frame?
(OR)

b) Explain in detail Autoleveller used in draw frame?

24. a) With suitable diagram explain cycle of operation in comber?
(OR)

b) With help of diagram explain the passage of material in comber machine?

25. a) Discuss the mechanism of winding and bobbin building technique in speed frame.
(OR)

b) Calculate the production in kg/shift/8hr simplex machine with the help of Following data
HK=1.2, No of spindles=120, spindle speed=800, TPI=1.01, Efficiency= 90 %
