Reg. No. : | | | | | | | | | | | |

T 3490

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Third Semester

Textile Technology

TT 1203 — SPUN YARN TECHNOLOGY

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by post ginning treatment?

2. What is the function of swing door in the bale breaker?

3. State the assisting factors in the transfer of fibers from cylinder to doffer in a card.

4. How do you assess the carding performance?

5. Why top rollers are covered with synthetic cots in a draw frame drafting system?

6. What is the purpose of silver doubling at draw frame?

7. State the reasons for the presentation of leading hooks to the comber needles.

8. What is the detaching distance in the combing process?

9. State the purpose of cone for drum for speed variation in a speed frame.

10. Write a brief note on Flyer of speed frame.

PART B — (5 × 16 = 80 marks)

11. (a) Describe in detail, with suitable sketch, and blow room machine that employs the "principle of buoyancy", in opening and cleaning of the cotton.

Or

(b) (i) With the aid of a neat sketch, describe the working of a Scutcher to produce uniform lap. (12)

(ii) What are the advantages of automatic lap doffing arrangement? (4)

12. (a) Show the passage of material between cylinder and flats. What is the effect of flat-cylinder interaction on the quality of card sliver?

Or

(b) With simple sketches, indicate the following setting points and explain the effect of the settings on the processing performances of card.

(i) Feed plate to Licker-in

(ii) Cylinder to Licker-in

(iii) Cylinder to Flats and

(iv) Cylinder to Doffer. (4 × 4)

13. (a) (i) Write the advantages of table type extended creel in high speed draw frame.

(ii) With suitable examples, explain the working of a modern drawn frame.

Or

(b) Why, the ideal drafting is not achievable? How, the movement of short fibers are controlled in draw frame drafting system?

14. (a) What are the objects of combing and what are the advantages claimed by combing process? In a combing machine, state the functions of the following :

(i) Detaching rollers

(ii) Nippers

(iii) Top comb. (2 + 2 + 4 + 4 + 4)

Or

(b) What are the importance of comber preparatory processes? Explain the working of super lap comber preparatory machine. (8 + 8)

15. (a) Discuss with proper sketches the "Differential mechanism" of speed frame builder motion, its construction, drive arrangement and function.

Or

(b) (i) Give an account of the drafting system used in speed frames and distribution of draft. (8)

(ii) Calculate the production of a speed frame per spindle per shift of 8 hours at 90% efficiency.

Spindle speed – 1400 RPM

Twist factor – 0.9

Roving Hank – 1.6 Ne. (8)