D 4087

B.E/B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

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. Distinguish between saw gin and Macarthy gin.

2. List out the advantages of Bale Digestors.

3. How will you alter the flat speed in the card?

4. Where exactly the fiber individualisation and nep removal taken place in a carding machine?

5. What is the purpose of sliver doubling?

6. How will you control floating fiber in the drafting system of draw frame?

7. What are the objectives of comber?

8. Give the preparatory processes for comber lap preparation in a most modern spinning mill.

9. Mention the reasons, why the drive to the bobbin rail originate from the cone drum in a speed frame.

10. What is meant by Bobbin leading?

PART B — (5 × 16 = 80 marks)

11. (a) Give an account of the cages, condensers and suction fans in the blow room. Sketch and explain the material passage through a beater to scutcher.

Or

(b) How will you express blend homogeneity? Explain the compatibility requirements of fibers during blending. What is blending delay time? How, BDT achieved in a modern blending machine?

12. (a) Define the following terms :

(i) Card loading

(ii) Carding intensity and

(iii) Card transfer efficiency.

With neat diagram, show the driving details of all the principal parts of the conventional lap fed card.

Or

(b) How, the fibers are transferred from cylinder surface to doffer surface? Explain the formation of hooks during transfer. What is web?

13. (a) Point out the importance of roller settings in a draw frame. What are the major causes of irregularity in a draw frame? What measures are taken to prevent occurrence of such faults in a modern draw frame?

Or

(b) Discuss the method of blending polyester and cotton at draw frame and their relative merits and demerits. What is post drawing in this context?

14. (a) Describe the cycle of events that occur in combing. Explain the important settings in comber in relation to noil extraction.

Or

(b) What are the advantages claimed by combing process?

In a combing machine, state the correct function of the following :

(i) Detaching roller

(ii) Nippers

(iii) Top comb.

15. (a) Describe the advantages of apron. Drafting system with a sketch used in a speed frame. What do you mean by apron spacer and give the effect of apron spacer on drafted strand.

Or

(b) With the aid, of a neat sketch, describe the various parts of a high speed flyer. What are the developments taken place in the design of the flyer to run at higher speed?