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**T 3494**

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

Fourth Semester

Textile Technology

TT 1254 — SPUN YARN TECHNOLOGY — II

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Name the different types of top roller loading systems of ring frame drafting.
2. What do you mean by traveller number in ring spinning?
3. What are the basic functions of rotor spinning system?
4. What do you mean by fibre belts in rotor spinning?
5. State the end uses of DREF spun yarns.
6. What are the merits and demerits of friction spinning?
7. State the methods of fasciated yarn manufacture.
8. What are the applications of airjet yarns?
9. State the different methods of twistless yarn manufacture.
10. Compare the double-rove yarn characteristics to that of the regular doubled yarn.

PART B — (5 × 16 = 80 marks)

11. (a) With suitable diagrams, discuss in detail the various types of rings and travellers used in ring frames with respect to their special objectives and advancements.

Or

- (b) Discuss the following :

- (i) Ring frame process parameters for synthetics. (4)  
(ii) Principle of different methods of condensed yarn manufacture. (12)

12. (a) Discuss the influence of the following on rotor yarn characteristics :

- (i) opening roller speed (4)  
(ii) rotor diameter (4)  
(iii) rotor groove design. (8)

Or

- (b) Discuss on :

- (i) Rotor yarn characteristics. (12)  
(ii) Automations in rotor spinning. (4)

13. (a) Give a detailed account on the developments taken place with the friction spinner with special reference to the machine design and features.

Or

- (b) Discuss the influence of the process parameters such as drum speed, yarn withdrawal rate, friction ratio, suction air pressure and twisting efficiency on the structure and characteristics of friction spun yarns.

14. (a) Discuss the influence of various process parameters on the structure and characteristics of airjet spun yarns.

Or

- (b) Account the various developments taken place with airjet spinning systems with respect to machine design and features.

15. (a) Give a detailed discussion on the influence of raw material, process and machine variables on the spinning performance of siro spun yarns.

Or

- (b) Discuss the following :

- (i) Self twist spinning principles. (8)
- (ii) Core yarn production techniques. (8)
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