



11. (a) Give a detailed discussion on the salient features of modern ring frame with respect to their drafting system and builder mechanism. (16)

Or

- (b) Discuss the following :  
(i) Ring frame spindles. (8)  
(ii) Condensed yarn spinning – Principle and any one method. (8)

12. (a) With suitable diagram, discuss the various actions taken place in open end rotor spinning system.

Or

- (b) Discuss in detail the influence of various fibre characteristics on the performance and characteristics of rotor spun yarns.

13. (a) Give a detailed analysis on the yarn forming process in DREF 2 friction spinning system with special reference to fibre feed, fibre assembly, twist insertion and yarn with drawal.

Or

- (b) Discuss the following :  
(i) Raw material requirement and yarn characteristics for DREF 3 friction spinning. (8)  
(ii) Machine developments in Friction spinning. (8)

14. (a) Discuss the quality of air jet yarns in relation to the various process parameters such as air pressure, draft, feed ratio, delivery rate and ribbon width.

Or

- (b) Discuss the principle of yarn formation in the following systems :  
(i) Murata Jet Spinning. (8)  
(ii) Murata vortex spinning. (8)

15. (a) With diagrams, discuss the manufacture of core-yarns in ring spinning, rotor spinning, friction spinning and air jet spinning.

Or

- (b) Discuss the structure and characteristics of  
(i) Wrap spun yarns. (8)  
(ii) Self twist yarns. (8)