



Name :

Roll No. :

Invigilator's Signature :

CS/M.Tech(TT/CPT)/SEM-2/MTT-203/2012

2012

TECHNOLOGY OF YARN FORMING

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer any *five* questions.

5 × 14 = 70

1. a) Explain different mechanisms of fibre transfer from the opening rollers. 8
b) What changes have been observed in the configuration of the fibres entering the rotor by changing the tubular feed channel to rectangular feed channel ? 6
2. Explain in detail the mechanisms of wrapper fibre formation in rotor spinning.
3. a) Explain why selection of twist is more critical in rotor spinning than in ring spinning. 6
b) Describe a method for determining the twist level inside the rotor. 8

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4. a) Describe the system of spinning from which the basic principle of air jet spinning been derived. 3
- b) Explain why two nozzle system is better than single nozzle system. 6
- c) Discuss about the importance of preparatory processes on the spinning performance and quality of air jet spun yarns. 5
5. a) What improvement have been made in Dref-5 over Dref-3 and why ? 4
- b) Describe how the twist in friction spinning can be determined theoretically. 10
6. a) Explain the importance of two.to.top converter in commercial and technological aspects. 2
- b) Discuss the different fundamental principles of methods used in two-to-top conversion process along with their relative advantages and disadvantages. 6
- c) Differentiate process flow charts between pacific converter and Turbo-stapter machines. 6



7. a) Explain theoretical quality and technical quality. Which one of them is associated with process control techniques ? 3
- b) Discuss two fundamental aspects in context with process control in spinning. 4
- c) Elaborate different factors affecting the control of raw materials in short staple spinning system with suitable example. 7
8. a) Describe the mechanism of off-line count control and off-line control of end breakage in spinning. On-line process control of above mentioned parameter is more appropriate. Explain. 10
- b) Illustrate different waste control measures in yarn formation processes. 4

