

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]  
(2125)

15299

**B. Tech 7th Semester Examination**  
**Non Conventional Yarn Manufacture (NS)**  
**TE-414/TE-7003**

**Time : 3 Hours**

**Max. Marks : 100**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt five questions in total selecting one question from each of the section A, B, C and D and all subparts of the question in section E.

**SECTION - A**

1. Classify different Non-conventional spinning methods. Explain twisting method of each method. (20)
2. Write down limitations of Ring spinning. What is the possibility of Rotor, Air-Jet and Dref yarn to replace Ring spun yarn? (20)

**SECTION - B**

3. Write down modern developments in Rotor spinning with diagrams. (20)
4. Explain difference between yarn structure of Rotor, Air Jet spun and vortex spun yarn. (20)

**SECTION - C**

5. Explain passage of material through Dref III machine. Write technical specifications and end-uses. (20)
6. Classify different types of compact spinning machines and methods. Write advantages and disadvantages. (20)

**[P.T.O.]**

2

15299

**SECTION - D**

7. Explain wrap spinning method with diagram. Write end-uses also. (20)
8. Compare the properties of self-twist, Solo spun and Core-spun. Which is better and why? (20)

**SECTION - E**

9. Attempt all questions:
  - (a) What is the importance of fibre fineness in yarn properties?
  - (b) Tenacity of Air Jet spun yarn is lesser than Ring yarn. Comment.
  - (c) What is ratio of yarn diameter and drum diameter in Dref spinning?
  - (d) Rotor yarn is mainly used for Denim. Comment.
  - (e) Compare strength of compact yarn and ring yarn.
  - (f) Delivery speed of Dref II is \_\_\_\_\_.
  - (g) Write names of two trustless yarn manufacturing technologies.
  - (h) Compare strength of Ring and Rotor yarn.
  - (i) Example of raw-material required for wrap spinning.
  - (j) Why air-jet yarn is stiffer than ring yarn? (10×2=20)