

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]  
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**B. Tech 4th Semester Examination**  
**Yarn Manufacturing-II (OS)**

TE-4003

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 all selecting at least one question from section A, B, C, D. Section E is compulsory.

**SECTION - A**

1. (a) How the leading fibre hooks are straighten by combing operation? (10)
- (b) State two important features of a new generation combers. (10)
2. In a modern comber, illustrate some developments of basic features with diagram compared to conventional ones. (20)

**SECTION - B**

3. What are the basic principles of flyer-leading and bobbin leading in a fly frames? Why the cone drums and differential box are used in building motion of fly frame? (20)
4. (a) What are the factors which are to be considered to insert roving twist in roving? (10)
- (b) Show the relationship amongst the numbers of fibre (N)/ cross section in roving, fibre diameter and roving hank (Ne). (10)

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**SECTION - C**

5. What are the basic features of a modern ring frame which allow the machine to run at high speed over conventional ones? (20)
6. State the importance of yarn guiding devices which are used in ring frames. (20)

**SECTION - D**

7. Compare the yarn properties obtained from open end spinning with ring spun machines. (20)
8. Compare DREF-2 and DREF-3 friction spinning Systems. (20)

**SECTION - E**

9. (a) Rotor spun yarn is more even than ring spun yarn. Explain.
- (b) Air Jet spinning can be called as open end spun yarn. Justify.
- (c) Define Spinning Geometry.
- (d) What is the role of top comb in extracting noil during combing process?
- (e) Why even number of passages is used in between card and comber noil?
- (f) How the trailing hooks are removed by drafting operation?
- (g) How a yarn is formed with the aid of false twist?
- (h) What is the role of thread guide in ring spinning machine?
- (i) What is the role of pressure arm to produce roving on fly frame?
- (j) What is detachment setting? (10×2=20)