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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Textile) (2011 Onwards) (Sem.–5)

**YARN MANUFACTURE – II**

Subject Code : BTTE-502

Paper ID : [A2731]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

**SECTION-A****1. Write briefly :**

- a) Why the optimization of comber lap thickness is necessary?
- b) How the trailing hooks in card sliver change their direction at individual processing stages before feeding to comber?
- c) What is the role of pressure arm in speedframe?
- d) At what conditions, the layers of roving will slide apart from the roving package and why?
- e) Define balloon tension and yarn tension and show their relationship.
- f) Why the operating speed of the traveler is limited?
- g) How a continuous yarn strand is formed in rotor groove?
- h) Why the rate of imparting twist is variable in friction spinning?
- i) What is the basic principle of yarn formation in air jet spinning?
- j) How the geometry of spinning triangle is altered in compact spinning?

### SECTION-B

2. What is the importance of self cleaning effect in combing process?
3. What do you mean by *Ratching* in speed frame? How it is controlled in modern machine?
4. State some important features of new generation ring - traveler combinations which help to increase spindle speed with minimum damage of yarn quality.
5. Compare the general features of ring spun and rotor spun yarn structures.
6. How you can make the yarn by false twist method?

### SECTION-C

7. In a modern comber, illustrate some developments of basic features with diagrams compared to conventional ones.
8. In the drafting system of speed frame, what is the role of the following individual components?  
*Condenser, spacer, top roller weighting, aprons*
9. Compare the advantages and the disadvantages of friction spun yarn properties over ring-spun yarn with proper justifications.