Printed Pages :3

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ETE502

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 161501

Roll No.

B. Tech. (Textile Technology)

(SEM. V) ODD SEMESTER THEORY EXAMINATION 2014-15

YARN MANUFACTURING – III

Time : 3 Hours] *[Total Marks : 100*

Note:(i) Attempt **all** questions.

(ii) All questions carry equal marks.

1. Attempt **any two parts** of the following:

(a) What are the objectives of combing process? Explain briefly how combing process improve yarn characteristics?

(b) What do you mean by Sliver Doubling & web doubling process? Explain briefly working of sliver lap, ribbon lap and superlap / unilap machines.

(c) What are the parameters related to raw material influences combing operation? What is noil percentage and how it affects the yarn quality.

2. Attempt **any two parts** of the following:

   (a) Describe the sequence of combing cycle with neat diagrams.

   (b) Explain the main features of Nasmith type comber and its limitations.

   (c) Calculate the production of a comber having 8 heads and working at speed of 300 nips / min, feed per nip is 5.2 mm for a lap weigh of 65 grams per meter; working on 90% efficiency and noil % is 18.

3. Attempt **any two parts** of the following:

   (a) Discuss the mechanism of imparting twist in roving in speed frame with appropriate diagram.

   (b) What are the objectives of speed frame? Explain the working of main parts of speed frame machine.

   (c) Explain briefly the mechanism of winding in speed frame with neat diagram.

4. Attempt **any two parts** of the following:

   (a) Explain reversal of bobbin rail movement in speed frame with neat diagram.

   (b) What are the main objectives of Builder motion in speed frame? Explain briefly the bobbin drive mechanism.

   (c) Describe the cone drum drive and belt shifting mechanism in speed frame.

5. Attempt **any two parts** of the following:

   (a) If the roving hank of 1.0 is produced from 0.14 hank of sliver in a speed frame having 3/3 drafting system, then calculate the total draft in the drafting zone. If the back zone draft is 1.2, then calculate front zone draft and show that total draft is the product of back zone and front zone draft.

   (b) Describe briefly common defects in roving packages with their possible causes.

   (c) Calculate the production/ shift (8 hours) in of speed frame having 120 spindles and 1 inch front roller diameter running at 200 rpm and producing 1.0 hank of roving. Take efficiency of the machine is 90%.

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