B. Tech.
(SEM. IV) EXAMINATION, 2006-07
SPINNING TECHNOLOGY - II

Time : 3 Hours] [Total Marks : 100

Note :   (1) Attempt all questions.
         (2) All questions carry equal marks.

1 Attempt any two of the following :
   (a) What are the objectives of comber? Why it is essential to keep even number of process between card and combing? Describe with detail reasoning.
   (b) Write in details the merits and demerits of counter feed & concurrent feed principles of comber.
   (c) How the performance of comber is assessed?

2 Attempt any two of the following :
   (a) Explain the combing cycle of any comber with reference to the index wheel.
   (b) Calculate the production of a comber in kgs. for 8 hours having the following particulars.
      (i) Lap fed – 8 k Tex
      (ii) Fed per Nip – 6 mm

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(iii) Nips / min – 300
(iv) Waster – 14%
(v) No. of heads – 8
(vi) Efficiency – 80%

(c) Describe the difference between carded and combed yarn in terms of manufacturing process and also in terms of yarn quality.

3. Attempt any two of the following:
   (a) What are the objects of speed frame? Describe at least two types of drafting arrangements in speed frame.
   (b) Write in details the function of cone-drum is speed frame.
   (c) What are the common defects produced in speed frame and what measures to be taken for remedy?

4. Attempt any two of the following:
   (a) Describe the important parts of Ring frame with their specific functions.
   (b) What factors are considered for good performance of Ring frame? Describe the causes of poor performance of ring frame and its remedial measures.
   (c) What are winding and binding motions? How they are actuated?
5 Attempt any two of the following:

(a) Why the spindle speed is controlled in different steps of the build of the yarn package? What are the common systems employed to vary the spindle speed?

(b) Find out the production per day of a spinning mill, having 50,000 spindles with following particulars:

   Count - 304

   T.M. - 3.8

   Average spindle speed – 17,500 (you can assume any other data required)

(c) What are the new automation systems incorporated in modern ring frames?