FOURTH SEMESTER
TEXTILE TECHNOLOGY
SCHEME JULY 2008
SPINNING PREPARATORY (401)

Time : Three Hours *Maximum Marks : 100*

Note : Attempt total **six** questions. Question No.1 (Objective type) is compulsory. From the remaining questions attempt any **five**.

1. Choose the correct answer. 2 each

   i) Noil removal in super combing ranges from

   (a) 1 to 5% (b) 5 to 10%

   (c) 10 to 20% (d) above 20%

   ii) Index wheel is associated with

   (a) Sliver lap machine (b) Ribbon lap machine

   (c) Combing machine (d) None of the above

   iii) Drafting waves are created due to:

   (a) Long fibres

   (b) In correct front zone setting

   (c) In correct top roller pressure

   (d) Short fibres

iv) In D/F front zone setting for cotton is usually

(a) Equal to E.L. (b) E.L. + 3 mm

(c) E.L. + 6 mm (d) E.L. + 9 mm

v) The main object of D/F is

(a) Parallel of fibres

(b) Individualization of fibres

(c) Cleaning of the fibres

(d) None of the above

2. a) What is Shirley drafting? Discuss what remedies were suggested by shirley to overcome the 'Roller Slip" problem. 9

b) What are the common faults in a D/F sliver? Mention their causes and give remedies. 9

3. a) What are the objects of Sliver Lap machine? With a neat sketch describe the working of sliver lap machine. 12

b) Write the maintenance schedule of comber. 6

4. a) What are major hooks and minor hooks? Explain why preparatory process is introduced before a carded material can be combed in the comber machine. 9

b) Sketch and explain the working of a super lap machine. 9

5. a) If the surface speed of front roller of a D/F is 200 m/min and the draft between coiler calendar roller and front roller is 1.05. Then calculate the production / shift of 8 hours in kg with 85% efficiency. Sliver delivered is 5 kg tax. 10

b) A comber delivers 60 grains/yd. of sliver eight ends of sliver from each head are double to give a total draft of 60. If the waste is 120 %. Then calculate what is the wt/yd of lap fed? 8

6. a) The front roller of a D/F is running at 1960 rpm and its diameter is 38 mm. The tention draft is 1.03. Calculate the production per machine for 8 hours with 80% efficiency and producing 1.13 hank sliver. 9

b) In a six head Ribbon lap machine each of the lap fed weights 520 grains/yard and draft given is 6.05. What will be the production in Lbs in 8 Hrs, at 100% efficiency? Also calculate the wt/yd. of lap delivered in grains, speed of 14" dia lap roller is 22 rpm. 9

7. a) What are the objects of Ribbon lap machine? Sketch and explain the working of Ribbon lap machine. 9

   b) With neat sketch explain the working of Nesmith comber. 9

8. Answer any three of the following. 6 each

   a) Detaching setting and Roller slippage.

   b) Write a short note on Spring weighting and Pneumatic weighting of draw frame.

   c) Write a short notes on maintenance schedule of draw frame.

   d) Write short notes on Comber waste.

   e) Write short notes on "Drafting Wave".

   f) Write short notes on faults in combing process.