Fourth Semester
Textile Technology
Scheme July 2008
SPINNING PREPARATORY (401)

Time : Three Hours *Maximum Marks : 100*

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

ii) Draw neat diagrams wherever necessary.

1. Write short answers of the following: 2 each
   a) Functions of detaching roller.
   b) Objects of spring in a weighting arrangement.
   c) Functions of Index Wheel
   d) Objects of trumpets
   e) Object of calender roller

2. a) Explain graduated drafting and Shinley drafting. Why Shinley drafting is preferred? Give draft distribution in a Shinley drafting system with a doubling of six and a draft of six. 13
   b) What is cot buffing? Explain. 5

3. a) Explain why preparatory process are introduced before the carded material can be combed in a comber machine. 12
   b) Give the maintenance schedule of comber machine. 6

4. a) What is Draft? Sketch and explain 4/5 drafting system. 9
   b) What are the common faults in a Draw Frame sliver? Mention their causes and remedies. 9

5. a) If the surface speed of front roller of a D/F is 200 metres/minute and the draft between coiler calender roller and front roller is 1.05, then calculate the production/shift of 8 hours with 85% efficiency and with 5.0kg tax sliver being produced. 9

   b) Find out the production / shift of 8 hours in a sliver lap machine in which calender roller of 5" diameter is making 110 r.p.m. Draft in the machine is 2.0 hank of each sliver fed in 0.129. Doubling is 2.0 and efficiency is 85%. 9

6. a) If in a six head ribbon lap machine each of the lap fed weighs 520 grains/yard and draft in the machine is 6.05, what will be the production in lbs. of m/c in 10 hours. Also calculate the weight/ yard of lap delivered in grains/yard. Assume the speed of 14" diameter lap roller is 22 r.p.m. 10

   b) A certain D/F with a 56T draft change wheel in delivering a 48 grains/yard sliver from 45 grains/yard fed. What will be the pinion required if 52 grains/yard is to be produced? Number of doubling is 6. 8

7. a) With the help of a neat sketch explain the working of a super lap machine. 12

   b) Compare top roller spring weighting and top roller pneumatic weighting. 6

8. Write short notes on any three of the following: 6 each

   a) 3/5 drafting system

   b) Types of feed

   c) Cylinder of combing machine

   d) Signal laps