Fifth Semester
Textile Technology
Scheme July 2008
SPINNING TECHNOLOGY (503)

Time : Three Hours ***Maximum Marks : 100***

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

1. Write short answers of the following: 2 each
   a) Object of traverse motion in a ring frame.
   b) Object of differential motion in a speed frame.
   c) Compare PK-225 and UT-620 drafting system.
   d) Function of balloon control rings.
   e) Function of solid leg of a flyer.

2. a) What is drafting? Sketch and explain PK-225 drafting system. 9
   b) Discuss the significance of antiwedge ring and elliptical traveller in a ring frame. 9

3. a) Draw a neat diagram of a ring frame spindle and name its parts. What is the function of dampening device available in high speed spindle? 9
   b) Sketch and explain the working of SKF-PK-1600-40 drafting system. 9

4. a) A ring frame produces 60^s yarn from a roving of 3.0 hank. If the draft constant is 1200 and C.P is 58T then calculate the twist contraction percentage. 9
   b) Find the bobbin speed of a speed frame when bobbin diameter = 1.75", spindle speed = 750 r.p.m. and front roller delivery is 1123.3"/min. 9

5. a) A roving frame produces a package of 450gm. The back roller speed is 30 r.p.m. and diameter is 1". The draft employed is 6.0, machine efficiency is 85%. Find the time for one full doff when machine delivers 3.0 hank roving. 9

   b) Find the production/shift of 8 hours of a ring frame having 400 spindles, spinning 20^s count and working at 80% efficiency, if the spindle speed is 9000 r.p.m. and T.M = 4.3. 9

6. a) What are the objects of differential motion in a speed frame? Sketch and explain the working of any differential motion. 12

   b) Give the maintenance schedule of speed frame. 6

7. a) What are the objects of speed frame? Sketch and describe the passage of material through a speed frame. 9

   b) What is running in of new rings? Explain how it is done. 9

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

   a) Novelty yarn

   b) Dual drive

   c) Speed frame cone drum

   d) Roving faults

   e) VPS drive