# 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 about answers of the following : 2each
   i) Object of spacer
   ii) Function of traveller clearer
   iii) Function of separator in R/F
   iv) Compare UT - 620 and UT - 630 drafting system
   v) Object of buffing

2. a) What is draft? Sketch and explain PK - 235 drafting system. 9
   b) Explain the different types of rings used in a ring frame. 9

3. a) What is T.F.O.? Sketch and describe the passage of material through a T.F.O showing its various parts. 9
   b) What do you mean by fancy yarn? Give the details of their production. 9

4. a) Find the production / spindle / 8 hours in kg. of a speed frame with 85% efficiency. Spindle speed = 720 rpm, hank spun is 1.5 and T.M = 1.4. 9
   b) The front roller speed of a ring frame producing $30^s$ count is 400" / min. Find the production / spindle / shift in ounce and in gms. and the total production of the machine in kg. if the member of spindle = 400. 9

5. a) The sliver fed to a speed frame has hank of 0.15. The draft in the machine is 12.0. Find the production in kg / shift of 8 hours per machine of 100 spindles with 80% efficiency and 400" / min. front roller delivery. 9

   b) A ring frame runs at 12000 rpm. with front roller delivery of 400"/min. If the bare bobbin diameter = 1" and ring diameter = $1\frac{5"}{8}$ then calculate the traveller rpm and also traveller surface speed in feet/sec. 9

6. a) Explain with neat sketch how the building motion alters the position of cone drum belt as the bobbin increases in diameter in case of bobbin leading speed frame. 12

   b) Give in brief the salient features of modern speed frame. 6

7. a) Sketch and explain the working of UTM - 620 - 104 drafting system. 9

   b) What are the causes of end breakages in ring frame and how will you rectify them? 9

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

   a) VPS drive

   b) Ring twister

   c) False twister

   d) Maintenance schedule of ring frame

   e) Centre of symmetry and centre of gravity.