THIRD SEMESTER
TEXTILE TECHNOLOGY
SCHEME JULY 2008
TEXTILE FIBRE (304)

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) Specific gravity of which of these fibres is 1.52?

   (a) Cotton (b) Nylon

   (c) Silk (d) Polyester

   ii) Cross-sectional structure of polyester fibre is,

   (a) Dog bone shape

   (b) Bean shape

   (c) Circular shape

   (d) Triangular shape

iii) Zeigler Natta Catalyst is used in the manufacture of which Fibre?

(a) Nylon 6, 6

(b) Polypropylene

(c) Dacron polyester

(d) Acrylic and Modacrylic

iv) In case of Acrylic the polymerisation is,

(a) Condensation

(b) Addition

(c) Substitution

(d) None of these

v) Keratin is a,

(a) Silk protein

(b) Wool protein

(c) Milk protein

(d) None of these

2. a) Give classification of 'Textile Fibre'. 12

   b) What are the essential properties of Textile Fibre? 6

3. With the help of a Flow-Sheet' diagram, explain the manufacturing of polyester fibre. 18

4. What is the object of texturisation? What are the different methods of texturing? Explain any one method of texturing with sketch. 18

5. What are the differences between wet, dry and melt spinning? Explain in brief the processes with flow sheet diagram. 18

6. a) Write down the density of Wool, Silk, Linen Cotton, Viscose and Nylon. 6

   b) What is the chemical composition of cotton and polypropylene? 6

   c) Classify wool by Sheep. 6

7. a) Define the 'Polymer' and Polymerisation with suitable examples. 9

   b) Draw the Cross-sectional and Longitudinal view of silk fibre. Also write down the physical and chemical properties of silk fibre. 9

8. Answer any three of the following 6 each

   a) Amorphous and Crystalline region

   b) Identification of Textile Fibre.

   c) Un-oriented filament yarn and fully oriented filament yarn.

   d) Isotactic and Atactic molecular arrangement of polypropylene.

   e) Theories regarding fine structure of Textile Fibre.