15017 TO 2020.

F/2017/6040 **Total Pages : 4**

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

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 sketch wherever necessary.

1. Choose the correct answer 2 each

i) Acrylic fibres can be spun by

(a) Wet spinning method

(b) Melt spinning method

(c) Dry spinning method

(d) Both dry and wet spinning method

ii) Zeigler Natta type of catalyst is used in the manufacture of which fibre

(a) Polyester (b) Nylon

(c) Viscose (d) Polypropylene

iii) Which fibre has the melting point of 215°C.

(a) Acrylic

(b) Nylon 6

(c) Nylon 6,6

(d) Polyester

iv) Wool fibre at boil dissolves in

(a) 0.5% KOH.

(b) 25% KOH.

(c) 0.5% NaOH.

(d) 5% NaOH.

v) Silk protein is called

(a) Keratin

(b) Sericin

(c) Fibroin

(d) Cellobiose

2. Classify textured yarns. What are the important properties given in texturising process? Explain 'False twist' method of texturising with the help of neat sketches. 18

3. What are the Raw materials which are used for manufacturing 'Terylene' polyester fibre? How these raw materials are manufactured and then converted into terylene polyester fibre? Explain with the help of a flow sheet diagram. 18

4. a) What do you understand by 'Wet', 'Dry' and Melt spinning method of man made fibres? Explain them with examples and sketches. 12

   b) Write down the moisture regain of all textile fibres in your syllabus in ascending order. 6

5. a) Draw and explain the cross-sectional and longitudinal diagram of cotton, wool, silk, viscose and acrylic fibres. 10

   b) What are the essential and desirable properties of a textile fibre? Explain. 8

6. a) Explain in detail what is 'Sericulture' 'reelling of silk' and 'trowsilk' of silk fibre. 12

   b) Explain the chemical composition and structural formula of cotton cellulose. 6

7. What is a 'Polynosic fibre'. Describe the method of production of polynosic fibre with the help of a flow sheet diagram. Also mention how it differs from viscose in the manufacturing process and properties. 18

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

   a) Identification of Textile Fibres

   b) Classification of wool by fleece

   c) Classification of synthetic fibres

   d) Compare addition polymerisation with condensation polymerisation

   e) Explain 'Degree of polymerisation' Crystalline and 'Amorphous' region of a textile fibre