P 481

B.Sc. (Applied Science) DEGREE EXAMINATION, NOVEMBER/DECEMBER 2003.

First Year

Apparel and Fashion Technology

FT 1.2 — TEXTILE FIBRES

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define : Fibre. What is the minimum length to diameter ratio for a fibre?

2. Give the identification techniques of Cellulose Acetate and Cellulose triacetate.

3. State the differences between Nylon 6 and Nylon 66.

4. What do you mean by birefringence?

5. Give the chemical structure of cotton and nylon 66.

6. Polyester chips are dried prior to melt spinning. Why?

7. Give the production technique of spandex fibre.

8. What do you mean by spin draw ratio?

9. What do you mean by felting? Briefly explain.

10. What are the amino acids present in wool?

PART B — (5 × 16 = 80 marks)

11. Give the physical and morphological characteristics of following fibres.
    (i) Cotton
    (ii) Wool
    (iii) Silk
    (iv) Jute
    (v) Viscose.

12. (a) Explain in detail how the textile fibres are identified by chemical tests.

Or

(b) Give a detailed view of different varieties of cotton available in India with respect to cultivation of fibres and their properties.

13. (a) Discuss the production and places of cultivation of jute and cotton fibre.

Or

(b) Draw the flow diagram of Nylon 6 and Nylon 66 filament yarn production and explain in detail.

14. (a) Write short notes on how acrylic fibres are manufactured by the following methods :

(i) Wet spinning

(ii) Dry spinning

(iii) Dry jet wet spinning.

Or

(b) Explain the production technique of PET multifilament from TPA method.

15. (a) Give a detailed account of production sequence, physical structure, properties of natural rubber.

Or

(b) What are Elastomeric fibres? Give a detailed account of their production techniques?
