

**M 2054**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Third Semester

Fashion Technology

FT 1202 — TEXTILE SCIENCE

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Distinguish between natural and man made fibres.
2. How will you identify the blend composition of P/C blended yarn?
3. What do you understand by crystalline and amorphous regions in a fibre? What is their influence on fibre characteristics?
4. What is Moisture Regain and Moisture content? List the Moisture Regain of cotton and polyester fibres?
5. Distinguish between Woollen and Worsted yarns.
6. Make a block diagram showing the important steps for the production of viscose rayon fibres.
7. What is Dupion Silk?
8. What are the physical properties of spandex fibre?
9. What are the chemical properties of Glass fibre?
10. What is the chemical test for the identification of spandex from other fibres?

PART B — (5 × 16 = 80 marks)

11. (i) Classify the textile fibres based on its origin, chemical type and give two examples for each. (10)
- (ii) What are the important fibre characteristics and their influence on yarn quality? (6)
12. (a) What are the processes involved in silk filament yarn production from silk worms? List the physical, chemical and thermal properties of silk. (12 + 4)

Or

- (b) What are Bast fibres? Explain the method of extraction of jute fibre. What are the physical properties of silk and wool?
13. (a) Discuss the three fibre spinning methods used for the man-made fibres? Make a flow chart to show the production of Acrylic fibre.

Or

- (b) Explain the process of manufacture of polyester staple fibre and filaments? What are the properties of polyester fibre?
14. (a) Explain the process of manufacture of glass fibre? What are the end uses of glass fibre? Discuss on metallic fibres.

Or

- (b) Explain the process of manufacture of Elastomeric fibres? What are the different forms of spandex yarns?
15. (a) Discuss on the microscopical views of cotton, flax, wool and polyester fibres.

Or

- (b) How will you identify the textile fibres based on Burning and chemical tests? Discuss the methods for Cotton, Silk, Polyester, Nylon, Acrylics and Wool.