Reg. No. : | | | | | | | | | | | |

T 3487

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Second Semester

(Regulation 2004)

Textile Technology

TT 1152 — TEXTILE FIBRE PRODUCTION

(Common to Textile Technology (Textile Chemistry))

Time : Three hours | Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the essential properties for textile fibres.

2. What are the basic requirements for fibre forming polymers?

3. List out the important silk varieties.

4. What are the steps involved in extracting jute fibres?

5. What is the purpose of manifold in melt spinning.

6. Compare the extruder over melt grids.

7. Name the monomers used for the production of polyester fibres.

8. Differentiate between dry spinning and wet spinning.

9. State the objectives of spin finish application.

10. What do you mean by temporary set?

PART B — (5 × 16 = 80 marks)

11. (a) With suitable diagrams, give a detailed account on the principles of various spinning techniques used for the production of man made fibres. (16)

Or

(b) Discuss the fluid flow characteristics of synthetic fibres with special reference to their spinnability, dieswell and brittle fracture. (16)

12. (a) Discuss in detail the pre and post cocoon operations for silk fibre manufacture. (16)

Or

(b) Give a detailed account on the cultivation practices, varieties, grading and baling of cotton fibres. (16)

13. (a) With suitable diagrams, discuss the various melt spinning equipments used for the production of polyester filaments. (16)

Or

(b) Discuss the following :

(i) Quenching techniques. (4)

(ii) High speed winders. (4)

(iii) Solution spinning variables. (4)

(iv) Spin pack assembly. (4)

14. (a) With neat sketches, explain the manufacture of Nylon 66 under the batch and continuous polymerization techniques. (16)

Or

(b) Discuss the following :

(i) Different melt spinning techniques for Polypropylene. (8)

(ii) Manufacture of Lyocell. (8)

15. (a) With principle sketches, discuss the various thermo mechanical techniques used for the texturing of filament yarns. (16)

Or

(b) Discuss the following :

(i) Spin finish composition. (4)

(ii) High speed spinning. (4)

(iii) Measurement of degree of set. (4)

(iv) Tow to Top conversion. (4)
