

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Second Semester

Textile Technology

TT 1152 — TEXTILE FIBRE PRODUCTION

(Common to Textile Technology (Textile Chemistry))

(Regulations 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the significance of fibre classification and give the classification of natural fibres.
2. Differentiate  $T_g$  and  $T_m$ .
3. What is hybrid varieties and state any two?
4. What is retting and state the methods?
5. State the significance of dynamic mixer.
6. State the composition of viscose spinning dope.
7. Give the structure of monomers used for the production of poly ethylene terephthalate.
8. State the various types of regenerated cellulosic fibres.
9. What is the need for spin finish?
10. Define tow and top.

PART B — (5 × 16 = 80 marks)

11. With the help of a flow chart explain the manufacturing of viscose rayon fibre and highlight the various chemical reactions involved in the process.

12. (a) Discuss in detail the cultivation practices of cotton.

Or

(b) Highlight the various processes involved in the production of filament and spun silk.

13. (a) Discuss the various types of spinning of man made fibres.

Or

(b) Highlight the structural aspects of polymeric fibres and discuss the fluid flow in fibre spinning.

14. (a) Discuss the various general features of melts spinning line.

Or

(b) Write short notes on any three of the following :

(i) Melt mani fold

(ii) Spin pack

(iii) Quench chamber

(iv) Coagulation bath.

15. (a) With a neat diagram explain any one type of tow to top converter.

Or

(b) Write short notes on any FOUR of the following :

(i) Drawing

(ii) Draw warping

(iii) Heat setting

(iv) Crimping

(v) High speed spinning.