E 9229

B.Sc. DEGREE EXAMINATION, JANUARY 2006.

First Semester

Apparel and Fashion Technology

BFT 111 — CHEMISTRY — I

(Regulation 2003)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How are the exhausted ion exchange resins regenerated?

2. Name any three substances used for sterilization of water.

3. Write note on ozone depletion.

4. What is green house effect?

5. What are the characteristics of a good quality coal?

6. What is wet gas?

7. How is thermal conductivity of a refractory related to its porosity?

8. Why should a lubricant posses low carbon residue?

9. Why is Kevlar much less flexible than Nylons?

10. Name the synthetic polymers which are used for making textile fibers.

PART B — (5 × 16 = 80 marks)

11. (i) What is desalination? Explain any one in detail. (8)

(ii) How will you measure the hardness of water by EDTA method? Explain. (8)

12. (a) (i) What are the common pollutants of air? Discuss their effect on environment. (8)

(ii) Discuss the effects of various water pollutants. (8)

Or

(b) (i) What is a sludge? Explain one method of its treatment. (8)

(ii) Write an account on the biological defects caused by noise pollution. (8)

13. (a) (i) Explain the petroleum refining with a neat diagram. (8)

(ii) Give an account of production of producer gas. (8)

Or

(b) (i) What is metallurgical coke? Describe any two methods of obtaining metallurgical coke. (10)

(ii) Write note on source, composition and uses of natural gas. (6)

14. (a) (i) Explain the bleaching action of any two bleaching agents. (8)

(ii) What are zeolites? How do they function in removing the hardness of water. (8)

Or

(b) (i) What are the important properties of good lubricant? (8)

(ii) Explain the preparation, properties and uses of silicon carbide. (8)

15. (a) (i) Distinguish between Nylon 6 : 6 and Nylon – 6. Give their structures. (8)

(ii) Explain the chemical and thermal resistance of polymers. (8)

Or

(b) (i) Explain the functionality of a monomer. Discuss its significance with a suitable example. (8)

(ii) Distinguish between addition polymerization and condensation polymerization. Give suitable examples. (8)
