

P 466

B.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2003.

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. What is Carbonate hardness? Name the salts causing it.
2. State Reverse Osmosis.
3. Define BOD and COD.
4. What is Smog?
5. Define Gross Calorific Value.
6. What is Bio-Gas?
7. What is Zeolite? Mention any one application.
8. What is meant by oxidizing bleaching agent? Give two examples.
9. Give the monomers with molecular formula for PTFE, Polyacrylonitrile, Nylon 6, and Polypropylene.
10. What is functionality? Give example.

PART B — (5 × 16 = 80 marks)

15. (a)

11. (i) Give in detail the EDTA method of estimation of total hardness of water. (8)
- (ii) Describe the method of water softening by ion-exchangers. (8)
12. (a) (i) What is water pollution? Give the various water pollutants. (8)
- (ii) Describe in detail the waste water treatment method. (8)

Or

- (b) (i) Give the various air pollutants. What are their effects? (8)
- (ii) Write notes on Acid rain, Green house effect and Global warming and Ozone depletion. (8)
13. (a) (i) What is meant by carbonization of coal? Describe in detail the Otto-Hoffman process for coke manufacture. (8)
- (ii) Describe the manufacture of Producer gas. Give its composition and uses. (8)

Or

- (b) (i) Describe the Fractional distillation of petroleum. What are the various fractions produced and their composition? (8)
- (ii) What is meant by cracking? Describe in detail any one method of catalytic cracking. (8)
14. (a) (i) Give in detail the sulphuric acid process for the manufacture of titanium dioxide pigment. What are its characteristics? (8)
- (ii) Write notes on Hydrogen peroxide, Silicon carbide and Graphite. (8)

Or

- (b) (i) Describe the American process for the manufacture of Zinc oxide pigment. What are its characteristics? (8)
- (ii) Write notes on sodium hydrosulphite, aluminium oxide and silicone oil. (8)

15. (a) How are the following manufactured? What are its uses? (4 × 4 = 16)

(i) Nylon 6

(ii) Polyethylene

(iii) Polyacrylonitrile

(iv) Polyester.

Or

(b) Write notes on the following : (4 × 4 = 16)

(i) Polytetraflouroethylene

(ii) Kevlar

(iii) Polypropylene

(iv) Degree of polymerization.
