Q 9344

B.Sc. DEGREE EXAMINATION, MAY/JUNE 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. Calculate the hardness of a sample of water containing $Mg(HCO_3)_2$ = 1.4mg, $MgCl_2$ = 9.5mg per litre.

2. How are exhausted ion-exchange resins regenerated?

3. COD values are generally higher than BOD values-Why?

4. What is greenhouse effect?

5. What do you understand by the term knocking?

6. Why coke is preferred to coal in metallurgical operations?

7. Mention the chemical composition of Lithophone.

8. Define the term : Grease.

9. What are polyesters?

10. What is Kevlar?

PART E — (5 × 16 = 80 marks)

11. (i) What are the various steps adopted in the purification of drinking water? Describe them briefly. (8)

(ii) With a neat diagram explain desalination of sea water by Reverse Osmosis method. (8)

12. (a) (i) How is Ozone formed and depleted? What are the consequences of depletion of ozone in the atmosphere? (8)

(ii) With a neat sketch explain trickling filter method of waste treatment. (8)

Or

(b) (i) How is COD determined experimentally? Indicate the significance of COD in sewage treatment. (8)

(ii) Discuss the various measures needed for effective noise control in domestic and industrial establishments. (8)

13. (a) (i) What is reforming? Discuss any two types of reforming methods. (8)

(ii) How will you analyse coal by proximate analysis? Discuss the significance of this method. (8)

Or

(b) (i) How will you manufacture petrol by Fischer-Tropsch method? Explain with a diagram. (8)

(ii) With a neat sketch explain the manufacture, comosition and uses of Gobar gas. (8)

14. (a) (i) What are solid lubricants? Discuss the structure of any two solid lubricants. (8)

(ii) What are Zeolites? Discuss the structure of Zeolites and mention its applications. (8)

Or

(b) (i) What are refractories? How are they classified? Discuss the following properties :

(1) Refractorieness

(2) Dimensional stability (8)

(ii) What are bleaching agents? Discuss the functioning of

(1) Sodium Hydrosulphite

(2) Hydrogen peroxide. (8)

15 [illegible] forms addition polymerisation and condensation [illegible] with atleast two suitable examples. (8)

(a) How will you obtain

(1) Polytetrafluoroethylene

(2) Polyacrylonitrile?

Mention their uses. (8)

Or

(b) (i) How will you prepare

(1) Nylon 6

(2) Nylon 6,6 (8)

(ii) What is meant by functionality of monomers? Discuss the significance of functionality with suitable examples. (8)