

2012

B.A./B.Sc. (General) First Semester

Industrial Chemistry

Paper - A: Industrial Aspect of Chemistry

Time allowed: 3 Hours

Max. Marks: 75

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Answer the following:-

- a) What are silicates?
- b) What is cellulose acetate?
- c) Define homogeneous and heterogeneous catalysis.
- d) Define gels.
- e) Explain Roasting.
- f) Write molecular formula and structure of furfural.
- g) Define adsorption Isotherm.
- h) Write advantages of coal.
- i) Define and explain surfactants.
- j) What is dextrin?

(10x1½)

UNIT – I

II. Explain following chemical processes:-

- a) Fractionation of crude oil
- b) Isomerisation
- c) Hydroforming

(3x5)

III. Write a note about:-

- a) Properties and structure of coal
- b) Reforming
- c) Natural gas

(3x5)

UNIT – II

IV. Explain manufacturing process of viscose and dextrose.

(15)

V. Write a note on following metallurgical operations:-

- a) Calcination
- b) Refining
- c) Pulverisation

(3x5)

P.T.O.

UNIT – III

- VI. Discuss physiochemical extraction of aluminium and lead. (15)
- VII. Write a detailed note on various inorganic materials of industrial importance discussing their availability, forms and structure. (15)

UNIT – IV

- VIII. Discuss in detail about the following:-
- a) Phase transfer catalysis
 - b) Sols
 - c) Aerosols (3x5)
- IX. Write in detail about:-
- a) Emulsions
 - b) Effect of surfactants
 - c) Negative catalysis (3x5)

x-x-x