Exam.Code:0001
Sub. Code: 0083

1129

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) Discuss some advantages of coal.

b) What do you mean by 'Reforming'?

c) Discuss in brief about the process, of Calcination of the ore.

d) Write the properties and uses of Cellulose.

e) Write the names of ores of Lead.

f) What the uses and properties of Sodium.

g) What are Zeolites?

h) What do you understand by micelles?

i) What is meant by Negative Catalysis?

j) Illustrate the role of emulsifier in stabilizing oil in water emulsions. (10x1½)

UNIT – I

II. a) Discuss physical and chemical properties of Natural gas.

b) Explain the term 'Cracking'. Discuss thermal cracking and catalytic cracking with the help of neat diagrams. (8,7)

III. a) Explain the different types, structure and properties of coal.

b) What do you mean by 'Hydroforming'? Discuss the various types of hydro forming. (9,6)

UNIT – II

IV. a) Discuss in detail the production-, process of Viscose with the help of a neat sketch.

b) Discuss the various types of alcohols and alcohol based chemicals. (8,7)

P.T.O.

V. Explain the following metallurgical operations:

a) Pulverisation

b) Roasting

c) Refining (3x5)

UNIT – III

VI. a) Describe the physiochemical principles of extraction of Silver with the help of labelled diagram.

b) Discuss the availability, forms, structure, modification and industrial importance of silicates. (8,7)

VII. a) Describe the extraction process of Iron with chemical reactions.
b) Write the properties and industrial importance of Alumina. (10,5)

UNIT – IV

VIII. a) What is an adsorption isotherm? Derive expression for Gibbs adsorption isotherm.

b) What are sols? Give their types with examples. (9,6)

IX. a) Write a note on lyophilc and lyophobic colloids.

b) What are the various types of microemulsions?

c) What is Phase Transfer Catalysis? (3x5)

x-x-x