

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, OCTOBER 2017.INORGANIC CHEMICAL TECHNOLOGY

[Maximum Marks : 100]

Time : 3 Hrs

PART-A  
[Maximum marks: 10]

Marks

- I. Answer all questions in one or two sentences. Each question carries 2 marks.
- List the raw materials for the manufacture of Aluminium Sulphate.
  - List the uses of Ammonia.
  - Write the chemical reaction involved in the manufacturing of Phosphoric acid.
  - List the two methods of Titanium Dioxide manufacturing.
  - List the application of Sodium silicate. [5X2=10]

PART - B  
[Maximum marks : 30]

- II Answer any five of the following questions. Each question carries 6 marks.

- Explain the process of purification and Ammoniation of brine.
- Explain the production of Bleaching powder from lime.
- Draw the flow diagram of DCDA process.
- Explain, Phosphoric acid manufacture by wet process.
- Describe the manufacturing process of triple Super Phosphate.
- Classify various type of refractory with examples.
- Summarise manufacture of sodium silicate. [5x6 =30]

PART - C  
[Maximum marks : 60]

[Answer one full question from each unit. Each full question carries 15 marks]

## UNIT I

- III (a) Describe Aluminium Sulphate manufacture from bauxite. [7]
- (b) Illustrate manufacturing process of chlorine. [8]

OR

- IV (a) Illustrate flow diagram of solvay process (7)  
(b) Explain the manufacturing process of liquid chlorine. (8)

UNIT- II

- V (a) Represent the flow diagram of  $\text{HNO}_3$  manufacture. (7)  
(b) Explain the manufacturing process of nitric acid. (8)

OR

- VI (a) Explain the phenomenon of catalyst poisoning. (5)  
(b) List chemical reactions involved in sulphuric acid manufacture. (5)  
(c) Explain the various grade of hydrochloric acid. (5)

UNIT- III

- VII (a) Indicate the flow diagram of ammonia manufacture. (7)  
(b) Explain the manufacturing process of ammonia. (8)

OR

- VIII (a) Indicate the flow diagram of ammonium sulphate manufacture by direct neutralization method. (7)  
(b) Describe ammonium sulphate manufacture by direct neutralization method. (8)

UNIT – IV

- IX (a) Explain construction and working of Rotary drier. (7)  
(b) Support with flow diagram, explain titanium dioxide manufacture by chloride process. (8)

OR

- X (a) List and explain various constituents of paint. (7)  
(b) Illustrate the manufacture of cement. (8)

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