Scheme – I

Sample Question Paper

Program Name : **Diploma in Chemical Engineering**
Program Code : **CH**
Semester : **Third**
Course Title : **Technology of Inorganic Chemicals**
Marks : **70** **Time: 3 Hrs.**

22314

Instructions:

(1) All questions are compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following. **10 Marks**

a) Name the principle in the manufacturing of oxygen & Nitrogen

b) Define calcinations for cement process.

c) List the industrial application of chlorine

d) Define red & yellow phosphorous

e) State industrial uses of ammonia

f) Enlist raw material for the manufacturing of the hydrochloric acid.

g) List disadvantages of biurate in manufacturing of urea

Q.2) Attempt any THREE of the following. **12 Marks**

a) Draw the process flow diagram for manufacturing of HCL

b) Explain the manufacturing process of ammonium nitrate

c) Compare single & triple superphosphate with respect to raw materials and uses.

d) Outline the importance of mixed fertilizer in agriculture sector.

Q.3) Attempt any THREE of the following. **12 Marks**

a) Classify the cement on the basis of constituents

b) Explain manufacturing of Water gas with raw material and flow diagram.

c) Draw the process flow diagram for manufacturing of Sulfuric acid

d) State industrial uses of ammonia

Q.4) Attempt any THREE of the following. 12 Marks

a) Explain pollution control method used i n manufacturing of superphosphate

b) Draw diagram of diaphragm cell.

c) Summaries the properties of good refractoriness

d) Explain manufacturing of Water gas with raw material and flow diagram.

e) Describe kinetics involved in manufacturing of sulfuric acid

Q.5) Attempt any TWO of the following. 12 Marks

a) Describe manufacturing of hydrochloric acid by synthesis method with raw materials, reaction & flow diagram. b) Describe the manufacturing of urea with raw materials and reactions.

c) Identify and manufacture the phosphorous required for match box sticks

Q.6) Attempt any TWO of the following. 12 Marks

a) Select brine as a raw material for manufacturing of soda ash.

b) Describe the concept of absorption for the manufacturing of carbon dioxide.

c) Apply the principle of DCDA in manufacturing of sulfuric acid with flow diagram.

Scheme – I

Sample Test Paper - I

Program Name : **Diploma in Chemical Engineering**

Program Code : **CH**

22314

Semester : **Third**

Course Title : **Technology of Inorganic Chemicals**

Marks : **20** **Time: 1 Hour.**

Instructions:

(1) All questions are compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) Draw the process flow diagram for manufacturing of HCL

b) Draw the process flow diagram for manufacturing of Phosphoric acid

c) Explain the manufacturing process of ammonium nitrate

d) Write physicochemical principle for maximum yield of SO3

e) Compare single & triple superphosphate with respect to raw materials and uses.

f) Explain pollution control method used i n manufacturing of superphosphate

Q.2 Attempt any THREE. **12 Marks**

a) Explain how yellow phosphors is converted into red phosphorou

b) Describe the manufacturing of ammonium nitrate with reaction condition

c) Describe the application of evaporation process for concentration of Nitric acid

d) Write reaction involved in the manufacturing of phosphoric acid

e) Describe the manufacturing of phosphorous by using electric arc process.

f) Describe the application of evaporation process for concentration of Nitric acid

Scheme – I

Sample Test Paper - II

Program Name : Diploma in Chemical Engineering
Program Code : CH
Semester : Third
Course Title : Technology of Inorganic Chemicals
Marks : 20 **Time: 1 Hour.**

22314

Instructions:

(1) All questions are compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **08 Marks**

a) Name the different grades of mixed fertilizer available in market.

b) Define calcinations for cement process

c) Name the principle in the manufacturing of oxygen & Nitrogen.

d) List the applications of industrial gases

e) Write reaction involved in the manufacturing of soda ash.

f) Define electrolysis process.

Q.2 Attempt any THREE. **12 Marks**

a) Outline the importance of mixed fertilizer in agriculture sector.

b) Classify the cement on the basis of constituents

c) Explain manufacturing of Water gas with raw material and flow diagram.

d) Draw diagram of diaphragm cell.

e) Explain the pollution control in manufacturing of mixed fertilizer

f) Describe the manufacturing process of potassium based fertilizer