

Scheme – I
Sample Question Paper

Program Name : Diploma in Chemical Engineering
Program Code : CH
Semester : Third
Course Title : Technology of Inorganic Chemicals
Marks : 70

22314

Time: 3 Hrs.

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 in manufacturing of superphosphate
- b) Draw diagram of diaphragm cell.
- c) Summarize 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
Semester : Third
Course Title : Technology of Inorganic Chemicals
Marks : 20

22314

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 in manufacturing of superphosphate

Q.2 Attempt any THREE.

12 Marks

- a) Explain how yellow phosphorus is converted into red phosphorus
- 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

22314

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) 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