

SEAT No. _____

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SARDAR PATEL UNIVERSITY

T.Y.B.Sc. Industrial Chemistry SEMESTER – V

EXAMINATION -2025

Chemical Process Industries

SUB CODE: US05CICH53



DATE: 07/10/2025

TIME: 10.00 AM TO 01.00 PM

DAY: Tuesday

TOTAL MARKS: 70

Q. 1 Choose the correct answer.

[10]

- (1) The main raw material for the manufacture of ammonia by Haber's process is _____.
(A) Nitrogen and Hydrogen (C) Nitrogen and Methane
(B) Nitrogen and Oxygen (D) Ammonia and Nitric acid
- (2) Urea is produced industrially by reacting ammonia with _____.
(A) Nitric acid (C) Sulphuric acid
(B) Carbon dioxide (D) Oxygen
- (3) Which fertilizer is known as CAN?
(A) Calcium Ammonium Nitrate (C) Urea
(B) Ammonium Sulphate (D) Ammonium Nitrate
- (4) Hydroxylamine (NH_2OH) is used mainly in _____.
(A) Explosives and photographic chemicals (C) As refrigerant
(B) Fertilizers (D) As catalyst
- (5) Which industrial gas is used for inert atmosphere in welding?
(A) Oxygen (C) Hydrogen
(B) Nitrogen (D) Sulphur dioxide
- (6) Sodium hypochlorite is mainly used as _____.
(A) Fertilizer (C) Explosive
(B) Bleaching agent and disinfectant (D) Refrigerant
- (7) Silicon carbide is also known as _____.
(A) Graphite (C) Borazon
(B) Carborundum (D) Diamond
- (8) Agrochemicals are mainly used for _____.
(A) Construction industry (C) Textile bleaching
(B) Agriculture (fertilizers, pesticides) (D) Metal finishing
- (9) Potassium permanganate is prepared industrially from _____.
(A) Manganese dioxide (C) Calcium carbide
(B) Sodium dichromate (D) Silicon carbide
- (10) Superphosphate of lime is produced by treating rock phosphate with _____.
(A) Sulphuric acid (C) Hydrochloric acid
(B) Nitric acid (D) Phosphoric acid



[P.T.O.]

Q.2 Answer the following.(attempt ten)

[20]

- (1) Write the use of ammonia.
- (2) Write action of Urea as Fertilizer.
- (3) Give the use of Iodine.
- (4) Give the application of Oxygen Gas.
- (5) Write the different electric Cell use in manufacturing of NaOH.
- (6) Write the use of Hydrogen gas.
- (7) Explain Advantage of electric furnace.
- (8) Give the source of magnesium material.
- (9) Write the application of SiC.
- (10) Enlist raw material require for manufacturing of superphosphate.
- (11) Define: Insecticide, Fungicide.
- (12) What is pesticide?

Q.3 (A) Write the Manufacturing process of Urea.

[05]

(B) Give the process of Calcium ammonium nitrate.

[05]

OR

Q.3 (A) Write the process of ammonium Nitrate.

[05]

(B) Write the help of flow diagram explain the manufacturing of fluorocarbon.

[05]

Q.4 (A) Write the manufacturing process of NaOH by using Diaphragm Cell.

[10]

Q.4 (A) Explain Production of Na_2CO_3 by Solvay Process.

[10]

Q.5 (A) Explain the Classification of electric furnace.

[05]

(B) Discusses the manufacturing process of synthetic graphite.

[05]

Q. 5 (A) Explain process of H_2O_2 Production process.

[05]

(B) Give the production detail of KMnO_4

[05]

Q. 6 (A) Write the help of flow diagram explain the manufacturing of Triple superphosphate.

[05]

(B) Write the short note on Ammonium Phosphate.

[05]

Q. 6 (A) Explain Wet process of Phosphoric Acid.

[05]

(B) Write in detail about Pesticide.

[05]

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