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Seat No.: _____



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SARDAR PATEL UNIVERSITY

Bachelor of Science (SEMESTER-5) EXAMINATION- 2022

US05CICV23 : (Heavy & Fine Chemicals)

Date : 12/11/2022, Saturday

Time : 10:00 A.M. TO 01:00 P.M.

Total Marks: 70

Note: Figures to the right indicate full marks of the questions.

Q.1 Multiple Choice Questions. (All are compulsory) [10]

1. Phosphoric acid is prepared from _____.
(a) Chalcopyrite (b) Cryolite (c) Rock phosphate (d) Silica
2. Ammonia Synthesis gas is passed through a filter to remove _____.
(a) Compression oil (b) H₂S (c) N₂ (d) H₂
3. Arsenic is removed from the crude phosphoric acid by action of?
(a) CO₂ (b) H₂S (c) H₂O (d) Na₂CO₃
4. Dehydration of perchloric acid produced _____.
(a) Chromic acid (b) Dichlorine heptoxide
(c) Sodium perchlorate (d) Ammonium perchlorate
5. What is the height of Carbonating Tower?
(a) 10-15 m (b) 22-25 m (c) 30-40 m (d) 45-50 m
6. _____ is used as anaesthetic agent.
(a) Ethanol (b) Chloroform (c) Carbon tetrachloride (d) Methanol
7. Which catalyst is used in Vapour phase reaction between acetylene and acetic acid gives yield vinyl acetate?
(a) Mercuric chloride (b) Zinc acetate
(c) Charcoal (d) Raney-nickel
8. In commercial production of Resorcinol _____ is the main feed stocks.
(a) Phenol (b) Benzene (c) Cumene (d) None of these
9. The action of Bleaching powder on acetone yields _____.
(a) Chloroform (b) Carbon Tetrachloride
(c) Methyl chloride (d) None of these
10. An oxidation of dimethyl sulfide produces _____.
(a) DMF (b) DMSO (c) THF (d) Dioxane

Q.2 Short Answer Questions. (Attempt any 10 out of 12) [20]

1. List out unusual characteristics of graphite.
2. Write uses of ammonia.
3. Define the term catalyst.
4. Write properties and uses of potassium dichromate
5. Enlist various methods for preparation of sodium carbonate.

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(P.T.O.)

6. Give the properties and uses of Potassium Dichromate.
7. Write uses of Vinyl acetate.
8. Write the raw materials required for the manufacturing of formic acid from sodium format.
9. Write the Uses of Formaldehyde.
10. Write the reaction for the manufacturing of alkylamines from alcohol and ammonia.
11. Write the raw materials reaction for the manufacturing of DMSO.
12. Give the chemical properties of Dioxane.

Q.3

Answer the given questions

- A. With the help of flow diagram explain the manufacturing of triple super phosphate. [5]
- B. Write a short note on lime. [5]

OR

- A. With the help of process flow diagram explain the manufacturing of Ammonia. [5]
- B. With the help of flow diagram explain the manufacturing of super phosphate. [5]

Q.4

Answer the given questions

- A. With the help of flow diagram explain the manufacturing of carbon tetrachloride. [5]
- B. Explain the Solvay's Ammonia Soda Process with Neat process flow diagram for manufacturing of Soda Ash. [5]

OR

- A. Explain the manufacturing of ethanol with neat process flow diagram. [5]
- B. With the help of flow diagram explain the manufacturing of chloroform. [5]

OR

Q.5

Answer the given questions

- A. Write a note on manufacturing and uses of Triphenyl Phosphine. [5]
- B. Explain in details about manufacturing and uses of Sorbitol. [5]

OR

- A. Write a note on melamine. [5]
- B. With the help of flow diagram explain manufacture of resorcinol. [5]

Q.6

Answer the given questions

- A. Explain the manufacturing of methyl chloride with neat process flow diagram. [5]
- B. Write a short note on DMF. [5]

OR

- A. Explain the Manufacturing of Alkylamines from alkyl chloride and ammonia with Process flow Diagram. [5]
- B. Write a short note on Dioxane. [5]