



C20-CH-403

7467

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DCHE – FOURTH SEMESTER EXAMINATION

INORGANIC CHEMICAL TECHNOLOGY

Time : 3 Hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Explain briefly the treatment of water by ion exchange process.
2. Explain briefly the preparation of common salt from seawater.
3. List the industrial applications and uses of HCl.
4. List out the industrial applications of acetylene.
5. Outline the production of making ammonium sulphate from gypsum.
6. Name the various feedstocks for the production of ammonia.
7. What are the different methods of manufacturing phosphoric acid?
8. Mention different grades of NPK fertilizers.
9. What is Portland cement?
10. What are the various constituents of paint?

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Explain the process of municipal water treatment with a neat diagram.

(OR)

(b) Write the method of manufacture of caustic soda and chlorine by electrolytic method with a neat flow diagram.

12. (a) Describe the production of sulphuric acid by contact process with a neat flow diagram.

(OR)

(b) Explain the production of CO₂ by fermentation with chemical reactions.

13. (a) Provide the manufacturing method of KCl from sylvinit with a neat flow diagram.

(OR)

(b) Explain the production of the following :

(i) Alum

(ii) Silicon carbide

14. (a) What are the different silicate products? Discuss the properties of electronic grade silica.

(OR)

(b) What is glass? Select the major materials required for glass manufacture.

15. (a) Explain the manufacture of varnish by oxidation and polymerization of drying oils.

(OR)

(b) Describe the process of preparation of iron oxide pigment.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Discover the process for making single and triple superphosphate with a neat flow diagram.

★★★