D 10127 (**Pages : 2**) **Name**.....

Reg. No.....

FIFTH SEMESTER U.G. DEGREE EXAMINATION, NOVEMBER 2021

(CUCBCSS–UG)

Chemistry

CHE 5B 06—INORGANIC CHEMISTRY – III

Time : Three Hours Maximum : 80 Marks

Section A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. Give two examples each of Ionic and Covalent Hydrides.
2. What are polyhalides? Give an example.
3. Define Accuracy.
4. Name two green house gases.
5. Draw the structure of Diborane.
6. What is levelling effect?
7. Name any two uses of Boric acid.
8. Draw the structure of SO_2.
9. What are Fullerenes?
10. Name two Lewis acids.

(10 × 1 = 10 marks)

Section B

Answer any **ten** *questions.*
Each question carries 2 *marks.*

11. Differentiate between Ortho and Para Hydrogen.
12. Discuss briefly Amorphous Carbon.
13. Discuss solubility product with examples.
14. Discuss the uses of phosphates in analysis and industry.
15. Write S.N. on anomalous properties of Oxygen.
16. Compare the Lewis acidity of Boron halides.
17. Write S.N. on Alternate refrigerants.
18. Write S.N. on uses of Ozone.
19. How is Hydrogen peroxide prepared?

Turn over

20. How is Nitric acid manufactured?
21. Write S.N. on Hazardous waste.
22. Discuss briefly COD.

(10 × 2 = 20 marks)

Section C

Answer any **five** *questions.*
Each question carries 6 *marks.*

23. Write S.N. on classification of errors. How are errors minimized?
24. Discuss in detail anomalous properties of Fluorine.
25. Write S.N. on acid rain.
26. Discuss the separation of nobles gases by charcoal adsorption method.
27. Discuss properties of Phosphazenes.
28. Discuss the diagonal relationship between Beryllium and Aluminium.
29. What are the adverse effects caused by toxic metals in water?
30. Write S.N. on thermal stability and solubility of carbonates.

(5 × 6 = 30 marks)

Section D

Answer any **two** *questions.*
Each question carries 10 *marks.*

31. (a) Discuss in detail co-precipitation and post-precipitation.
    (b) Write S.N. on uses of Noble gases.

(5 + 5 = 10 marks)

32. (a) Compare the Ionization energy and metallic character of alkali and alkaline earth metals.
    (b) Write S.N. on preparation, properties and uses of Borazine and Boron Nitride.

(6 + 4 = 10 marks)

33. (a) Write S.N. on structure and applications of Silicones and Silicates.
    (b) Write S.N. on impacts of medical waste and their disposal.

(6 + 4 = 10 marks)

34. (a) Write S.N. on Minamata disaster and Chernobyl accident.
    (b) Write S.N. on Eutrophication.
    (c) Discuss the applications of solubility product and common ion effect in the precipitation of cations.

(4 + 2 + 4 = 10 marks)

[2 × 10 = 20 marks]