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# FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2023

Chemistry

#### CHE 5B 06—INORGANIC CHEMISTRY—III

(2019 Admission onwards)

Time: Two Hours

Maximum: 60 Marks

#### Section A (Short Answers)

Answer questions up to 20 marks.

Each question carries 2 marks.

- 1. How does phosphate interfere in the analysis of group 3 radicals?
- 2. Explain the term microanalysis.
- 3. Discuss the structure of  $XeF_4$  molecule.
- 4. Which is the most stable interhalogen compound among IF, IBr and BrCl?
- 5. Why noble gases are chemically inert?
- 6. What are posphonitrilic chlorides?
- 7. Why are salts less soluble in liquid SO<sub>2</sub> than in water?
- 8. Represent autoionisation of ammonia.
- 9. Discuss the structure and property of  $\mathrm{S}_2\mathrm{N}_2.$
- 10. What is acid rain?
- 11. Triple R is important term in managing waste. Justify.
- 12. What are the four major types of medical wastes?

(Ceiling of marks: 20)

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### Section B (Paragraph)

Answer questions up to 30 marks. Each question carries 5 marks.

- 13. What are the different methods of precipitate formation?
- 14. Describe zone refining.
- 15. Give an account of pseudohalogens? Discuss the structure of CIF<sub>3</sub>.
- 16. Give the structure of oxides and fluorides of Xenon.
- 17. What are silicones? Describe its structure and application.
- 18. Define greenhouse effect.
- 19. Discuss the challenges in managing *e*-waste.

(Ceiling of marks: 30)

## Section C (Essay)

Answer any **one** questions.

The question carries 10 marks.

- 20. Name two ores of Uranium. How is uranium metal obtained from its ore?
- 21. Explain the sources of water pollution. What are the control measures for water pollution?

 $(1 \times 10 = 10 \text{ marks})$