

22U518

(Pages: 2)

Name:

Reg.No:

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U CHE5 B06 - INORGANIC CHEMISTRY - III

(Chemistry - Core Course)

(2019 Admission onwards)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. Give one method for the preparation for (a) BrF_3 and BrF_5 .
2. Difference between pseudohalides and pseudohalogens. Give examples.
3. Mention the two uses of biogas.
4. How can chromate be eliminated from a mixture?
5. Explain the term the heterocatenation.
6. How can cyclic (NPCl), be converted into cyclic $[\text{NP}(\text{CH}_2)_2]$?
7. Explain how HClO_4 , behaves in liquid HF.
8. Why carbon is used to reduce the zinc oxide?
9. What are Martensitic stainless steel?
10. Distinguish between BOD and COD.
11. What are the toxic effects of lead?
12. What is the fissile material used in the atomic bomb "Fat Man"? Write its fission chain reaction.

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

Answer *all* questions. Each question carries 5 marks.

13. What is the shapes and hybridisation of XeOF_2 and XeOF_4 molecules?
14. Explain briefly about plastic pollution.
15. Give an account of yellow coloured precipitates in the context of interfering anions.
16. Discuss the uses and properties of polyphosphasenes.
17. Explain the terms flux and slag as applied to metallurgical operations.

18. Write a short notes on alternative refrigerants.
19. What is eutrophication? What are its adverse consequences?

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any *one* question. The question carries 10 marks.

20. What are the process involved in the extraction of iron from haematite?
21. Explain the sources, effects and control measures of radioactive pollution.

(1 × 10 = 10 Marks)
