D 110115 **(Pages : 2)** **Name.....**

Reg. No.....

FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2024

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. List out any *four* interfering acid radials and their elimination methods.
2. Give the composition of gunmetal and German silver.
3. Explain the automotive applications of stainless steel.
4. Explain any *four* uses of noble gases.
5. Why Silicone resins are good water repellents and thermal resistant ?
6. $KCl + AgNO_3 \rightarrow AgCl + KNO_3$, instead of water, liquid ammonia is used as solvent. What will be change takes place in this reaction ?
7. What is BOD? How it is used for the assessment of water pollution?
8. Discuss any *two* after effects of thermal pollution.
9. Explain the procedure for COD.
10. Write a short note of Plachimada movement
11. Discuss the impacts of e - waste and their disposal.
12. How to reduce the pollution due to plastic ?

(Ceiling of marks : 20)

Turn over

Section B (Paragraph)

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

13. Explain the mechanism of precipitation in gravimetric estimation using barium is precipitated as barium sulphate.

14. Write a short note on :

    (a) Zone refining ; and

    (b) Electrometallurgy.

15. Compare the properties of halogens and interhalogen compounds.

16. Find out the hybridisation and structure of $XeOF_4$ and XeO_2F_2.

17. Why alkali metals in liquid ammonia exhibit blue in colour? And explain the characteristics of blue coloured solution.

18. Discuss carefully the mechanism of the formation of photochemical smog and their adverse effects.

19. Discuss the energy production from waste.

(Ceiling of marks : 30)

Section C (Essay)

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

20. (a) Explain the extractive metallurgy of aluminium from bauxite.

    (b) Discuss the structure and hybridisation of IF_5 and IF_7.

21. (a) Explain the preparation properties and structure of phosphonitrilic chlorides.

    (b) Briefly discuss about Minamata disaster.

(1 × 10 = 10 marks)