D 70214 (Pages : 2) Name.....

Reg. No.....

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2015

(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. The element with the electronic configuration $1s^2 2s^2 2p^6 3s^2 p^6 d^{10} 4s^1$ belongs to ———— block.
2. An example of interfering acid radical is ————.
3. The most abundant element in the Nitrogen family is ————.
4. Metals which is an important constituent of Chlorophill is ————.
5. The formula of diCarbaclosodo deCa Carborane is ————.
6. An example of green house gas is ————.
7. An example of Ortho Silicate is ————.
8. Formula of Bleaching powder is ————.
9. Fullerenes are allotropes of Carbon having the general formula ————.
10. Solid Carbon dioxide is commonly known as ————.

(10 × 1 = 10 marks)

Section B

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

11. What are Inorganic polymers ?
12. Define (a) Pollution ; (b) Pollutant.
13. Cu (II) is precipitated as CuS in dil. HCl medium, while Co (II) is precipitated as CoS in ammoniacal medium. Why ?
14. What are the adverse effects of Cadmium as water pollutant ?
15. Define Allotropy.
16. What are Pseudohalides ?

Turn over

17. Explain the geometry of IF_5.
18. Define solubility product with an example.
19. Name any two applications of NH_3.
20. Name any two uses of Boron.
21. How does Ortho Hydrogen differ from para Hydrogen ?
22. What are Ionising and non-ionising solvents ?

(10 × 2 = 20 marks)

Section C

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

23. Differentiate between accuracy and precision.
24. What are the uses of noble gases ?
25. Discuss the role of Selenium in Xerography.
26. What is levelling effect ?
27. What are Clathrate compounds of Noble gases ?
28. What is Thermal pollution ?
29. What are the limitations of liquid SO_2 as solvent ?
30. What is Co-precipitation ?

(5 × 6 = 30 marks)

Section D

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

31. (a) How are Errors classified ? Explain. (6 marks)
    (b) Discuss briefly different types of sampling. (4 marks)
32. (a) Write S.N. on Phosphazenes. (5 marks)
    (b) How are Non-aqueous solvents classified ? Explain with examples. (5 marks)
33. (a) Compare the properties of halogens and pseudo halogens. (5 marks)
    (b) Write S.N. on electronegativity. (5 marks)
34. (a) What is inert pair effect. Discuss. (4 marks)
    (b) What are Carboranes ? How are Carboranes classified ? (6 marks)

(2 × 10 = 20 marks)