

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(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 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$ 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 Chlorophyll 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. as 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]