CLASS : XII   **TIME   : 1.30HRS**

SUB : CHEMISTRY   **MARKS : 50**

PART-I

CHOOSE THE CORRECT ANSWER   **10 X 1 =10**

1. Zinc can be coated on iron to produce galvanized iron but the reverse is not possible. It is because
   a) Zinc is lighter than iron
   b) Zinc has lower melting point than iron
   c) Zinc has lower negative electrode potential than iron
   d) Zinc has higher negative electrode potential than iron

2. Which of the following electrolytic solution has the least specific conductance

   a) 2N   b) 0.002N   c) 0.02N   d) 0.2N

3. Faraday constant is defined as
   a) charge carried by 1 electron
   b) charge carried by one mole of electrons
   c) charge required to deposit one mole of substance
   d) charge carried by 6.22×10^{10} electrons.

4. IUPAC name of the complex is $K_3[Al(C_2O_4)_3]$ is_____

   a) potassiumtrioxalatoaluminium(III)   b) potassiumtrioxalatoaluminate(II)

   c) potassiumtrisoxalatoaluminate(III)   d) potassiumtrioxalatoaluminate(III)

5. $[Co(en)_2Cl_2]Cl$ coordination number is _____

   a) 4   b) 6   c) 2   d)1

6. $[Ni(CO)_5]$ complex geometry is _____

   a) Linear   b) Trigonal planar   c) Tetrahedral   d) Octahedral

7. Which one of the following is not strong ligand

   a) Cl   b) CN^- c) NH_3 d) CO

8. Which one of the following is most basic?

   a) 2,4 – dichloroaniline   b)2,4- diethylamine

   c) 2,4 – dimethyl aniline   d) 2,4 – dinitroaniline

9. When aniline reacts with acetic anhydride the product formed is

   a) o – aminoacetophenone.   b) m-aminoacetophenone

   c) p – aminoacetophenone.   d) acetanilide

10. Secondary nitro alkanes react with nitrous acid to form

   a) red solution.   b) blue solution   c) green solution   d) yellow solution

PART-II

ANSWER THE FOLLOWING ANY FIVE QUESTIONS   **5 X 2 =10**

NOTE : QUESTION NO : 17 IS COMPULSORY

11. What is carbylamine rreaction

12 .In an octahedral crystal field draw the figure to show splitting of d orbitals

13. Define anode and cathode

14. .Define equivalent conductance

15. Give any two difference between double salt and coordination compound

16. Mention any two factors that affect electrolytic conductance

17. How is chloropicrin prepared ?

PART-III

ANSWER THE FOLLOWING ANY FIVE QUESTIONS   **5 X 3 =15**

NOTE : QUESTION NO : 24 IS COMPULSORY

18. what are the limitation of VB theory ?

19. What is crystal field stabilization energy ?

20. .$[Ni(CO)_4]$ diamagnetic , explain using VB theory

21. write short note on Gabriel phthalimide synthesis ?

22. Why PKb of aniline is more than ethylamine?

23. Write a electrolytic reduction of nitrobenzene?

24. Ionic conductance at infinite dilution of Al^{3+} and SO_4^{2-} 189 and 160 mho cm2 equivalent calculate the equivalent and molar conductance of the electrolyte $Al_2(SO_4)_3$ at infinite dilution.

PART-IV

ANSWER ALL THE QUESTIONS   **3 X 5 = 15**

25. a) i)write the postulates of werner's theory(3)

   ii) Write the IUPAC ligand name for the following (2)

   a) $C_2O_4^{2-}$ b) H_2O

(OR)

   b) based on the VB theory ,explain why$[Ni(CN)_4]^{2-}$ it is diamagnetic.(5)

26. a) State kohlrausch law and explain any two of the application(5)

(OR)

   b) i)Derive an expression for Nernst equation(3)

   ii)What are the conversion used Galvanic cell notation ?(2)

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27.a) How will you distinguish between primary, secondary and tertiary aliphatic amines. (5)

(OR)

   b)i)Nitrous acid react with primary and secondary amine and tertiary amine(3)

   ii) write the mustard oil reaction ?(2)

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