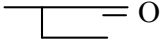
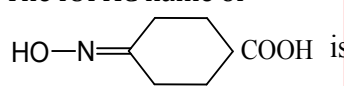


Class : XIIth
Date :

Subject : CHEMISTRY
DPP No. : 10

Topic :- Coordination Compounds

- The IUPAC name of $\text{Na}_3[\text{Co}(\text{ONO})_6]$ is:
 - Sodium cobaltinitrite
 - Sodium hexanitritocobaltate(III)
 - Sodium hexanitrocobalt(III)
 - Sodium hexanitritocobaltate(II)
- CuSO_4 decolourises on addition of KCN, the product is:
 - $\text{Cu}(\text{CN})_4^{2-}$
 - $[\text{Cu}(\text{CN})_4]^{3-}$
 - $\text{Cu}(\text{CN})_2$
 - CuCN
- Exchange of coordination group by a water molecule in complex molecule results in:
 - Ionization isomerism
 - Ligand isomerism
 - Hydration isomerism
 - Geometrical isomerism
- The type of isomerism found in urea molecule is
 - Chain
 - Position
 - Tautomerism
 - None of these
- The IUPAC name of the compound  is
 - Butane-2-aldehyde
 - 2-methyl butanal
 - 2-ethyl propanal
 - None of the above
- Anisol is a product obtained from phenol by the reaction known as:
 - Coupling
 - Etherification
 - Oxidation
 - Esterification
- Which of the following is diamagnetic in nature?
 - $[\text{Fe}(\text{CN})_6]^{3-}$
 - $[\text{NiCl}_4]^{2-}$
 - $[\text{Ni}(\text{CO})_4]$
 - $[\text{MnCl}_4]^{2-}$
- Which is the strongest field ligand?
 - CN^-
 - NO_2^-
 - NH_3
 - en

9. Nitrobenzene on reduction with Zn and *aq.* NH_4Cl gives:
- Aniline
 - Nitrosobenzene
 - N*-phenyl hydroxylamine
 - Hydrazobenzene
10. The IUPAC name of $[\text{Co}(\text{NH}_3)_5\text{ONO}]^{2+}$ ion is
- Pentaammine nitrito cobalt (IV) ion
 - Pentaammine nitro cobalt (III) ion
 - Pentaammine nitrito cobalt (III) ion
 - Pentaammine nitro cobalt (IV) ion
11. The compound which does not show paramagnetism is
- NO_2
 - NO
 - $[\text{Ag}(\text{NH}_3)_2]\text{Cl}$
 - $[\text{Cu}(\text{NH}_3)_4\text{Cl}_2]$
12. Which of the following is expected to undergo nitration more easily and readily to furnish the corresponding nitro derivatives employing the usual nitrating mixture?
- C_6H_6
 - $\text{C}_6\text{H}_5\text{NO}_2$
 - $\text{C}_6\text{H}_5\text{CH}_3$
 - $\text{C}_6\text{H}_5 \cdot \text{CCl}_3$
13. The number of unpaired electrons calculated in $[\text{Co}(\text{NH}_3)_6]^{3+}$ and $[\text{Co}(\text{F}_6)]^{3-}$ are
- 4 and 4
 - 0 and 2
 - 2 and 4
 - 0 and 4
14. The IUPAC name of
- 
- HO-N=C₆H₁₀-COOH is
- 4-hydroxy amino benzene carboxylic acid
 - 4-(*N*-hydroxy) imino benzene carboxylic acid
 - 4-hydroxy imino cyclohexanoic acid
 - 4-(*N*-hydroxy) imino cyclohexane-1-carboxylic acid
15. The IUPAC name of the coordination compound $\text{K}_2[\text{Zn}(\text{OH})_4]$ is
- Potassium tetrahydrozine (II)
 - Dipotassium tetrahydroxo(II)
 - Potassium tetrahydroxozincate (II)
 - Potassium tetrahydroxozincate (III)
16. Arrange in order of decreasing trend towards S_E reactions, Chlorobenzene, Benzene, Anilium chloride, Toluene:
- (II)
 - (III)
 - (IV)
- $\text{II} > \text{I} > \text{III} > \text{IV}$
 - $\text{III} > \text{I} > \text{II} > \text{IV}$
 - $\text{IV} > \text{II} < \text{I} > \text{III}$
 - $\text{I} > \text{II} > \text{III} > \text{IV}$
17. Toluene is nitrated and the resulting product is reduced with tin and hydrochloric acid. The product so obtained is diazotised and then heated with cuprous bromide. The reaction mixture so formed contains:
- Mixture of *o*- and *m*-bromotoluenes

- b) Mixture of *o*- and *p*-bromotoluenes
 - c) Mixture of *o*- and *p*-dibromobenzenes
 - d) Mixture of *o*- and *p*-bromoanilines
18. A positive carbylamine test is given by:
- a) *N,N*-dimethylaniline
 - b) 2,4-dimethylaniline
 - c) *N*-methyl-*o*-methylaniline
 - d) *p*-methyl benzylamine
19. CN^- is strong field ligand. This is due to the fact that
- a) It carries negative charge
 - b) It is a pseudohalide
 - c) It can accept electrons from metal species
 - d) It forms high spin complexes with metal species.
20. Which of the following is not true for ligand metal complex?
- a) Highly charged ligand forms strong bond
 - b) Greater the ionization potential of central metal, the stronger is the bond
 - c) Larger the permanent dipole moment of ligand, the more stable is the bond
 - d) Larger the ligand, the more stable is the metal-ligand bond

PE