

DPP

DAILY PRACTICE PROBLEMS

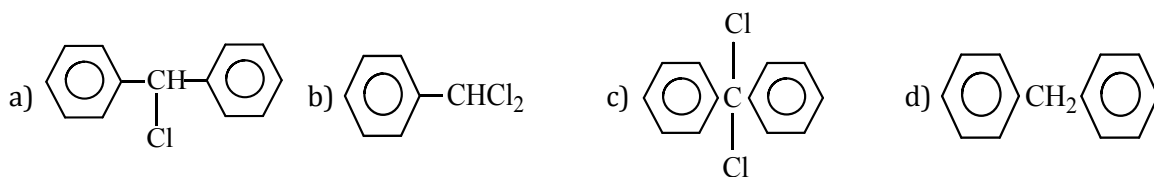
Class : XIIth
Date :

Subject : CHEMISTRY
DPP No. : 3

Topic :- Coordination Compounds

- Chlorophyll is a coordination compound having central atom of:
a) Ca b) Mg c) Na d) K
- Which of the following statements is incorrect?
a) In $K_3[Fe(CN)_6]$, the ligand has satisfied only the secondary valency of ferric ion.
b) In $K_3[Fe(CN)_6]$, the ligand has satisfied both primary and secondary valencies of ferric ion.
c) In $K_4[Fe(CN)_6]$, the ligand has satisfied both primary and secondary valencies of ferrous ion.
d) In $[Cu(NH_3)_4]SO_4$, the ligand has satisfied only the secondary valency of copper.
- Maximum number of open chain isomers that an alkene can have with the molecular formula C_4H_8 is
a) 5 b) 4 c) 3 d) 2
- Which one is the wrong statement?
a) Open chain compounds are called aliphatic
b) Unsaturated compounds contain multiple bonds in them
c) Saturated hydrocarbons are called alkene
d) Aromatic compounds possess a characteristic aroma
- According to postulates of Werner's theory for coordination compounds, which of the following is true?
a) Primary valencies are ionizable b) Secondary valencies are ionizable
c) Only primary valencies are non-ionizable d) Primary and secondary valencies are non-ionizable
- Atomic numbers of Cr and Fe are respectively 24 and 26. Which of the following is paramagnetic with the spin of the electron?
a) $[Cr(CO)_6]$ b) $[Fe(CO)_5]$ c) $[Fe(CN)_6]^{4-}$ d) $[Cr(NH_3)_6]^{3+}$

7. Which of the following structures correspond to the product expected, when excess of C_6H_6 reacts with CH_2Cl_2 in presence of anhy. $AlCl_3$?



8. Which of the following will give a pair of enantiomorphs?



9. The crystal field splitting energy for octahedral (Δ_0) and tetrahedral (Δ_t) complexes is related to

a) $\Delta_t = \frac{4}{9}\Delta_0$ b) $\Delta_t = \frac{1}{2}\Delta_0$ c) $\Delta_0 = 2\Delta_t$ d) $\Delta_0 = \frac{4}{9}\Delta_t$

10. The correct name of the compound $[Cu(NH_3)_4](NO_3)_2$, according to IUPAC system is:

- a) Cuprammonium nitrate
 b) Tetraamminecopper(II) dinitrate
 c) Tetraamminecopper(II) nitrate
 d) Tetraamminecopper(I) dinitrate

11. Which among the following will not show chain isomerism?



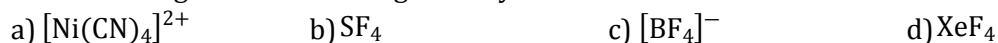
12. Phenol (1 mole) reacts with bromine to give s-tribromophenol. How much bromine is needed?



13. Dimethyl glyoxime forms a coloured complex with



14. Which has regular tetrahedral geometry?



15. In haemoglobin the iron shows oxidation state:



16. For the given complex $[CoCl_2(en)(NH_3)_2]^+$, the number of geometrical isomers, the number of optical isomers and total number of isomers of all type possible respectively are



17. Which can show aromatic character?

- a) Furan b) Pyrrol c) Benzene d) All of these
18. Of the following complexes, the one with the largest value of the crystal field splitting is:
a) $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$ b) $[\text{Ru}(\text{CN})_6]^{3-}$ c) $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$ d) $[\text{Fe}(\text{NH}_3)_6]^{3+}$
19. The specific rotation of a pure enantiomer is $+16^\circ$. Its observed rotation if it is isolated from a reaction with 25% racemisation and 75% retention is
a) -12° b) $+12^\circ$ c) $+16^\circ$ d) -16°
20. Lithium tetrahydridoaluminate is correctly represented as:
a) $\text{Al}[\text{LiH}_4]$ b) $\text{Al}_2[\text{LiH}_4]_3$ c) $\text{Li}[\text{AlH}_4]$ d) $\text{Li}[\text{AlH}_4]_2$

PE