

Class : XIIth
Date :

Subject : CHEMISTRY
DPP No. : 5

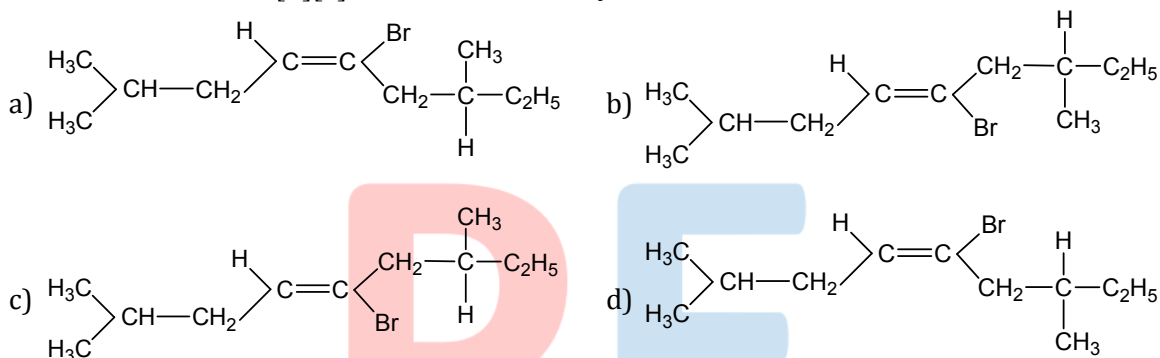
Topic :- Coordination Compounds

- Phenol on sulphonation gives:
 - o*-phenol sulphonic acid
 - p*-phenol sulphonic acid
 - m*-phenol sulphonic acid
 - Mixture of *o*- and *p*-phenol sulphonic acids
- Which of the following organometallic compound is σ and π bonded?
 - $\text{Fe}(\text{CH}_3)_3$
 - $[\text{Co}(\text{CO})_5\text{NH}_3]^{2+}$
 - $[\text{Fe}(\eta^5 - \text{C}_5\text{H}_5)_2]$
 - $\text{K}[\text{PtCl}_3(\eta^2 - \text{C}_2\text{H}_4)]$
- The number of double bonds in BHC (gammexane) is:
 - 1
 - 2
 - 3
 - Zero
- Given the molecular formula of the hexa coordinated complexes (A) $\text{CoCl}_3 \cdot 6\text{NH}_3$ (B) $\text{CoCl}_3 \cdot 5\text{NH}_3$ (C) $\text{CoCl}_3 \cdot 4\text{NH}_3$. If the number of coordinated NH_3 molecules in A, B and C respectively are 6, 5 and 4, primary valency in (A), (B) and (C) are
 - 0, 1, 2
 - 3, 2, 1
 - 6, 5, 4
 - 3, 3, 3
- Type of isomerism shown by $[\text{Cr}(\text{NH}_3)_5\text{NO}_2]\text{Cl}_2$ is
 - Optical
 - Ionisation
 - Geometrical
 - Linkage
- $[\text{Sc}(\text{H}_2\text{O})_6]^{3+}$ ion is
 - Colourless and diamagnetic
 - Coloured and octahedral
 - Colourless and paramagnetic
 - Coloured and paramagnetic
- Which one of the following octahedral complexes will not show geometrical isomerism? (A and B are monodentate ligands)
 - $[\text{MA}_4\text{B}_2]$
 - $[\text{MA}_5\text{B}]$
 - $[\text{MA}_2\text{B}_4]$
 - $[\text{MA}_3\text{B}_3]$
- The IUPAC name of the following compound is
$$\begin{array}{c} \text{O}=\text{C}-\text{CH}-\text{CH}_2 \\ | \quad | \quad | \\ \text{OH} \quad \text{NH}_2 \quad \text{OH} \end{array}$$
 - 3-amino-2-hydroxy propanoic acid
 - 2-aminopropan-3-ol-1-oic acid

16. The colour of $[\text{Ti}(\text{H}_2\text{O})_6]^{3+}$ is due to:
- Transfer of an electron from one Ti to another
 - Presence of water molecule
 - Excitation of electrons from $d - d$
 - Intramolecular vibration

17. The oxidation number of Fe in $\text{K}_4[\text{Fe}(\text{CN})_6]$ is
- +3
 - +4
 - +2
 - 2

18. Correct structures of $[\text{E}][\text{S}]-5\text{-bromo-2,7-dimethyl, non-4-ene}$ is



19. Name the metal M which is extracted on the basis of following reactions,
- $$4M + 8\text{CN}^- + 2\text{H}_2\text{O} + \text{O}_2 \rightarrow 4[\text{M}(\text{CN})_2]^- + 4\text{OH}^-$$
- $$2[\text{M}(\text{CN})_2]^- + \text{Zn} \rightarrow [\text{Zn}(\text{CN})_4]^{2-} + 2M:$$
- Nickel
 - Silver
 - Copper
 - Mercury

20. EAN of Cr in $[\text{Cr}(\text{NH}_3)_6]\text{Cl}_3$ is:
- 32
 - 33
 - 34
 - 35