

Class : XIIth Date : Subject : CHEMISTRY DPP No. : 5

Topic :- Coordination Compounds

1.	Phenol on sulphonation gives: a) o-phenol sulphonic acid b) <i>p</i> -phenol sulphonic acid c) <i>m</i> -phenol sulphonic acid d) Mixture of <i>o</i> -and <i>p</i> -phenol sulphonic acids					
2.	Which of the following organon a) $Fe(CH_3)_3$ b) [Co(d) K[PtCl ₃ ($\eta^2 - C_2H_4$)]	
3.	The number of double bonds ir a) 1 b) 2	BHC (gammex	ane) is: c) 3		d)Zero	
4.	Given the molecular formula of the hexa coordinated complexes $(A) \operatorname{CoCl}_3 \cdot 6\operatorname{NH}_3(B)\operatorname{CoCl}_3 \cdot 5\operatorname{NH}_3(C) \operatorname{CoCl}_3 \cdot 4\operatorname{NH}_3$. If the number of coordinated NH_3 molecules in <i>A</i> , <i>B</i> and <i>C</i> respectively are 6, 5 and 4, primary valency in (A) , (B) and (C) are a) 0, 1, 2 b) 3, 2, 1 c) 6, 5, 4 d) 3, 3, 3					
5.	Type of isomerism shown by [(a) Optical b) Ionis	₂ is c) Geometrical d) Linkage				
6.	$[Sc(H_2O)_6]^{3+}$ ion is a) Colourless and diamagnetic c) Colourless and paramagnetic		b) Coloured and octahedral d) Coloured and paramagnetic			
7.	Which one of the following octahedral complex B are monodentate ligands)a) $[MA_4B_2]$ b) $[MA_5B]$		tes will not show geometrical isomerism? (A and c) $[MA_2B_4]$ d) $[MA_3B_3]$			
8.	The IUPAC name of the followin $O = C - CH - CH_2$ $OH NH_2 OH$ a) 3-amino-2-hydroxy propano		onan-2-o	l-1-oic acid		
	aj 5-ammo-2-nyuroxy propanoic aciu		b)2-aminopropan-3-ol-1-oic acid			

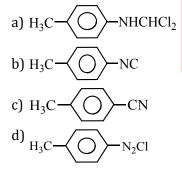
c) 2-amion-3-hydroxy propanoic acid

d) Aminohydroxy propanoic acid

- 9. Which of the following complex ion is not expected to absorb visible light?
 - a) $[Ni(CN)_4]^{2-}$
 - b) $[Cr(NH_3)_6]^{3+}$
 - c) $[Fe(H_2O)_6]^{2+}$
 - d) $[Ni(H_2O)_6]^{2+}$
- 10. The correct sequence of activating power of a group in benzene is:
 - a) $-NH_2 > -NHCOCH_3 > -CH_3$ b) $-NH_2 < -NHCOCH_3 < -CH_3$ c) $-NH_2 > -NHCOCH_3 < -CH_3$ d) $-NH_2 < -NHCOCH_3 > -CH_3$
- 11. The pair of compounds having metals in their highest oxidation state is a) MnO₂, FeCl₃ b) [MnO₄]⁻,CrO₂Cl₂

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c) [Fe(CN) ₆] ^{3–} ,[Co(CN) ₃]	d) $[NiCl_4]^{2-}$, $[CoCl_4]^{-}$

- 12. Total number of geometrical isomers for the complex [RhCl(CO)(PPh3)(NH2)] isa) 1b) 2c) 3d) 4
- 13. The reaction of chloroform with alc. KOH and *p*-toluidine forms:

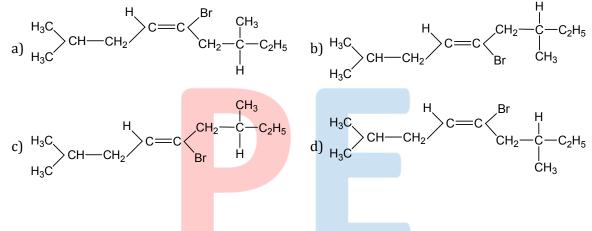


14. Which order is correct in spectrochemical series of ligands?

a) $Cl^- < F^- < [C_2O_4]^{2-} < NO_2^- < CN^-$

- b) $CN^{-} < [C_2O_4]^{2-} < Cl^{-} > NO_2^{-} < F^{-}$
- c) $[C_2O_4]^{2-} < F^- < Cl^- > NO_2^- < CN^-$
- d) $F^- < Cl^- < NO_2^- < CN^- < [C_2O_4]^{2-}$
- 15. The IUPAC name of compound K_3 [Fe(CN)₅NO] is
 - a) Pentacyano nitrosyl potassium ferrate(II) b) Potassium cyano pentanitrosyl ferrate(II)
 - c) Potassium pentacyanonitrosyl ferrate (III) d) Potassium pentacyanonitrosyl ferrate (II)

- 16. The colour of $[Ti(H_2O)_6]^{3+}$ is due to:
 - a) Transfer of an electron from one Ti to another
 - b) Presence of water molecule
 - c) Excitation of electrons from d d
 - d) Intramolecular vibration
- 17. The oxidation number of Fe in $K_4[Fe(CN)_6]$ isa) +3b) +4c) +2d) -2
- 18. Correct structures of [E][S]-5-bromo-2,7-dimetyl, non-4-ene is



- 19. Name the metal *M* which is extracted on the basis of following reactions, $4M + 8CN^{-} + 2H_2O + O_2 \rightarrow 4[M(CN)_2]^{-} + 4OH^{-}$ $2[M(CN)_2]^{-} + Zn \rightarrow [Zn(CN)_4]^{2-} + 2M:$ a) Nickel b) Silver c) Copper d) Mercury
- 20. EAN of Cr in $[Cr(NH_3)_6]Cl_3$ is:

 a) 32
 b) 33
 c) 34
 d) 35