DPP
DAILY PRACTICE PROBLEMS

Class : XIIth
Date :

Solutio

Subject : CHEMISTRY
DPP No. : 2

Topic :- Coordination Compounds

1 **(b)**
$[(C_6H_5)_3P)_3RhCl]$ or $[(Ph_3P)_3RhCl]$ is a Wilkinson's catalyst, the most widely used of all catalysts for homogeneous hydrogenation.

2 **(c)**
Halogens attack double bond of C_6H_6 in presence of light. In absence of light as well as in presence of only $AlCl_3$, S_E reactions are noticed.

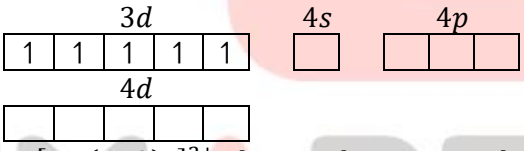
3 **(d)**
$[Pt(NH_3)_6]Cl_4$ complex gives five ions in the solution.
$[Pt(NH_3)_6]Cl_4 \rightleftharpoons [Pt(NH_3)_6]^{4+} + 4Cl^-$

4 **(a)**
The EAN for Cu in $[Cu(NH_3)_4]^{2+}$ is 35 and not 36, the next inert gas at. No.

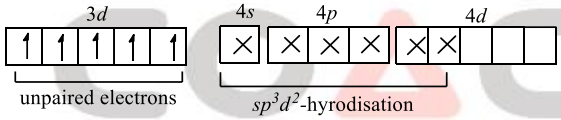
5 **(a)**
$1 \times 3 + a + 6 \times (-1) = 0, \quad \therefore a = +3$

6 **(a)**
In $NaOC_2H_5$, Na is attached to O-atom.

7 **(b)**
In $[Mn(H_2O)_6]^{2+}$, Mn is present as Mn^{2+}or Mn (II), so its electronic configuration
$= 1s^2, 2s^2 2p^6, 3s^2 3p^6 3d^5$

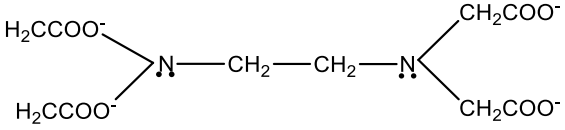


In $[Mn(H_2O)_6]^{2+}$, the coordination number of Mn is six, but in presence of weak field ligand, there will be no pairing of electrons in $3d$. So, it will form high spin complex due to presence of five unpaired electron.
In $[Mn(H_2O)_6]^{2+}$



10 **(b)**
Due to aromatic nature; $C_6H_5CH_2OH$ is exception and does not burn with sooty flame.

11 **(c)**
EDTA (Ethylenediaminetetraacetic acid)



It is hexadentate (6 electron pairs) that's why for octahedral complex only one EDTA is required.

13 **(c)**
It is Friedel-Crafts reaction.

14 **(a)**

Resonance in phenoxide ion makes it more stable. More stable is ion less stable is phenol or more is acidic nature.

15 **(c)**

Triethylenediamine cobalt(III) chloride is $[Co(NH_2CH_2CH_2NH_2)_3]Cl_3$; $NH_2CH_2CH_2NH_2$ is bidentate ligand and thus, coordination no. $= 3 \times 2 = 6$.

17 **(c)**

CO is a neutral ligand, so the oxidation state of metal in metal carbonyls is always zero.

$[Ni(CO)_4]$

$x+(0\times4)=0$

$x=0$

18 **(b)**

$FeCl_3 + Cl_2 \longrightarrow FeCl_4^- + Cl^+$

19 **(a)**

$[Ni(CN)_4]^{2-}$ has dsp^2-hybridization while $[Ni(Cl_4)^{2-}]$ and $[Ni(CO_4)]$ have sp^3-hybridization.

20 **(b)**

$3C_2H_2 \xrightarrow{\Delta} C_6H_6$

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**B**	**C**	**D**	**A**	**A**	**A**	**B**	**B**	**B**	**B**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**C**	**B**	**C**	**A**	**C**	**C**	**C**	**B**	**A**	**B**