

Date Planned : __ / __ / __	Daily Tutorial Sheet-2	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration : _____

16. Which of the following pair of transition metal ions, have the same calculated values of magnetic moment?
(A) Ti^{2+} and V^{2+} **(B)** Fe^{2+} and Cu^{2+} **(C)** Cr^{2+} and Fe^{2+} **(D)** Co^{2+} and Ti^{2+}
17. Which metal gives hydrogen gas on heating with conc. NaOH ?
(A) Ag **(B)** Ni **(C)** Zn **(D)** Cu
18. On igniting Fe_2O_3 with carbon at $1400^\circ C$, the product obtained is :
(A) Fe_2O_3 melt **(B)** FeO **(C)** Fe_3O_4 **(D)** metallic iron
19. Choose the correct reaction to prepare mercurous chloride (calomel)
(A) $HgCl_2 + Hg \xrightarrow{\Delta}$ **(B)** $Hg + Cl_2 \longrightarrow$
(C) $HgCl_2 + SnCl_2 \longrightarrow$ **(D)** Both (A) and (C)
20. $FeSO_4 \cdot (NH_4)_2SO_4 \cdot 6H_2O$ is called :
(A) green salt **(B)** Glauber's salt **(C)** Mohr's salt **(D)** alum
21. Which of the following is called white vitriol ?
(A) $ZnCl_2$ **(B)** $MgSO_4 \cdot 7H_2O$ **(C)** $Al_2(SO_4)_3$ **(D)** $ZnSO_4 \cdot 7H_2O$
22. The following two reactions HNO_3 with Zn are given as (equations are not balanced)
(A) $Zn + \text{conc. } HNO_3 \rightarrow Zn(NO_3)_2 + X$
(B) $Zn + \text{dil. } HNO_3 \rightarrow Zn(NO_3)_2 + Y$
 In reactions A and B, the compounds X and Y respectively, are :
(A) NO_2 and NO **(B)** NO_2 and NO_2 **(C)** NO and NO_2 **(D)** NO_2 and H_2O
23. What is the oxidation state of iron in Mohr's salt ?
(A) +3 **(B)** 0 **(C)** +2 **(D)** +1
24. The gas obtained by reaction of $K_4[Fe(CN)_6]$ with conc. H_2SO_4 is : 
(A) H_2S **(B)** CO **(C)** NO_2 **(D)** CO_2
25. Which one of the following reactions will occur on heating $AgNO_3$ above its melting point ? 
(A) $2AgNO_3 \longrightarrow 2Ag + 2NO_2 + O_2$ **(B)** $2AgNO_3 \longrightarrow 2Ag + N_2 + 3O_2$
(C) $2AgNO_3 \longrightarrow 2AgNO_2 + O_2$ **(D)** $2AgNO_3 \longrightarrow 2Ag + 2NO + 2O_2$
26. Excess of KI reacts with $CuSO_4$ solution and then $Na_2S_2O_3$ solution is added to it. Which of the statements is correct for this reaction ? 
(A) Cu_2I_2 formed **(B)** CuI_2 is formed
(C) $Na_2S_2O_3$ is reduced **(D)** Evolved I_2 is oxidised

27. $\text{Cl}_2 + \text{HgO} \longrightarrow ?$
 (A) $\text{Cl}_2\text{O} + \text{Hg}_2\text{Cl}_2$ (B) $\text{Cl}_2\text{O} + \text{HgCl}_2$ (C) $\text{ClO} + \text{HgCl}$ (D) $\text{ClO} + \text{HgCl}_2$
28. KI and CuSO_4 solutions on mixing produce : 
 (A) $\text{Cu}_2\text{I}_2 + \text{K}_2\text{SO}_4$ (B) $\text{Cu}_2\text{I}_2 + \text{I}_2 + \text{K}_2\text{SO}_4$
 (C) $\text{CuI}_2 + \text{K}_2\text{SO}_4$ (D) $\text{CuI}_2 + \text{I}_2 + \text{K}_2\text{SO}_4$
29. Philosopher's wool on heating with BaO at 1100°C produce :
 (A) $\text{Ba} + \text{ZnCl}_2$ (B) BaCdO_2 (C) BaZnO_2 (D) $\text{BaO}_2 + \text{Zn}$
30. When calomel reacts with NH_4OH solution, the compound formed is :
 (A) $\text{NH}_2 - \text{Hg} - \text{Cl}$ (B) $\text{Hg}_2\text{Cl}_2\text{NH}_3$ (C) $\text{Hg}(\text{NH}_3)_2\text{Cl}_2$ (D) HgCl_2NH_3