

CLASS : XII<sup>th</sup>

DATE :

SUBJECT : CHEMISTRY

DPP NO. : 4

## Topic :-REDOX REACTIONS

- When a sulphur atom becomes a sulphide ion :
  - It gains two electrons
  - The mass number changes
  - There is no change in the composition of atom
  - None of the above
- Titre value is the volume of titrant used for a definite amount of unknown reagent at its :
  - Equivalence point
  - End point
  - Neutralization point
  - All of these
- Oxidation states of X,Y,Z are +2, +5 and  $-2$  respectively. Formula of the compound formed by these will be
  - $X_2YZ_6$
  - $XY_2Z_6$
  - $XY_5$
  - $X_3YZ_4$
- In which compound, oxygen has an oxidation state of +2 ?
  - $H_2O_2$
  - $H_2O$
  - $OF_2$
  - CO
- If equal volumes of 1M  $KMnO_4$  and 1 M  $K_2Cr_2O_7$  solutions are allowed to oxidise  $F^{2+}$  to  $F^{3+}$  in acidic medium volume of oxidant required for one mole of  $F^{2+}$  will be :
  - $V_{KMnO_4} > V_{K_2Cr_2O_7}$
  - $V_{KMnO_4} < V_{K_2Cr_2O_7}$
  - $V_{KMnO_4} = V_{K_2Cr_2O_7}$
  - Nothing can be predicted
- How many gram of  $KMnO_4$  should be taken to make up 250 mL of a solution of such strength that 1 mL is equivalent to 5.0 mg of Fe in  $FeSO_4$ ?
  - 1.414 g
  - 0.70 g
  - 3.16 g
  - 1.58 g
- The oxidation number of Cr in  $K_2CrO_4$  is
  - +3
  - 6
  - +6
  - 3
- In the reaction,  $2Na_2S_2O_3 + I_2 \rightarrow Na_2S_4O_6 + 2NaI$ , the oxidation state of sulphur is :
  - Decreased
  - Increased
  - Unchanged
  - None of these
- The equivalent weight of  $KMnO_4$  (acidic medium) is (at. wt. of K = 39; Mn = 55) :
  - 158
  - 15.8
  - 31.6
  - 3.16

10. The oxidation number of chromium in potassium dichromate is  
a) +2                              b) +4                              c) +6                              d) +8
11. The equivalent weight of  $\text{MnSO}_4$  is half of its molecular weight when it is converted to :  
a)  $\text{Mn}_2\text{O}_3$                               b)  $\text{MnO}_2$                               c)  $\text{MnO}_4^-$                               d)  $\text{Mn}_4^{2-}$
12. Aqueous solution of  $\text{SO}_2$  reacts with  $\text{H}_2\text{S}$  to precipitate sulphur. Here  $\text{SO}_2$  acts as :  
a) Catalyst                              b) Reducing agent                              c) Oxidizing agent                              d) Acid
13. Saline hydrides are :  
a) Strong oxidants  
b) Strong reductants  
c) Strong dehydrating agents  
d) Strong bleaching agents
14. State the oxidation number of carbonyl carbon in methanal and methanoic acid respectively  
a) 0 and 0                              b) 0 and +2                              c) +1 and +2                              d) +1 and +3
15. The eq. wt. of  $\text{I}_2$  in the change  $\text{I}_2 \rightarrow \text{IO}_3^-$  is :  
a) 12.7                              b) 63.5                              c) 25.4                              d) 2.54
16. Equivalent mass of oxidizing agent in the reaction is.  
 $\text{SO}_2 + 2\text{H}_2\text{S} \rightarrow 3\text{S} + 2\text{H}_2\text{O}$   
a) 32                              b) 64                              c) 16                              d) 8
17. In a conjugate pair of reductant and oxidant, the reductant has :  
a) Lower ox.no.                              b) Higher ox.no.                              c) Same ox.no.                              d) Either of these
18. In which of the following reactions, hydrogen is acting as an oxidising agent?  
a) With Li to form LiH    b) With  $\text{I}_2$  to give HI    c) With S to give  $\text{H}_2\text{S}$     d) None of the above
19. The number of moles of Mohr's salt required per mole of dichromate ion is :  
a) 3                              b) 4                              c) 5                              d) 6
20. For reducing one mole of  $\text{Fe}^{2+}$  ion to Fe, the number of faraday of electricity is :  
a) 2                              b) 1                              c) 1.5                              d) 4