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

- The difference in the oxidation states of the two types of sulphur atoms in  $\text{Na}_2\text{S}_4\text{O}_6$  is :   
**(A)** 4                      **(B)** 5                      **(C)** 6                      **(D)** 7
- Oxidation states of the metal in the minerals haematite and magnetite, respectively, are :  
**(A)** II, III in haematite and III in magnetite    **(B)** II, III in haematite and II in magnetite  
**(C)** II in haematite and II, III in magnetite    **(D)** III in haematite and II, III in magnetite
- In the reaction  $\text{H}_2\text{S} + \text{H}_2\text{O}_2 \longrightarrow \text{S} + 2\text{H}_2\text{O}$  :   
**(A)**  $\text{H}_2\text{S}$  is an acid and  $\text{H}_2\text{O}_2$  is a base  
**(B)**  $\text{H}_2\text{S}$  is a base and  $\text{H}_2\text{O}_2$  is an acid  
**(C)**  $\text{H}_2\text{S}$  is an oxidising agent and  $\text{H}_2\text{O}_2$  is a reducing agent  
**(D)**  $\text{H}_2\text{S}$  is a reducing agent and  $\text{H}_2\text{O}_2$  is an oxidising agent
- The oxidation state of Fe in  $\text{Fe}_3\text{O}_4$  is :   
**(A)** +3                      **(B)**  $+\frac{8}{3}$                       **(C)** +6                      **(D)** +2
- 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
- $\text{H}_2\text{S}$  reacts with halogens, the halogens :   
**(A)** Form sulphur halides                      **(B)** Are oxidised  
**(C)** Are reduced                      **(D)** None of these
- Among  $\text{NH}_3$ ,  $\text{HNO}_3$ ,  $\text{N}_2$  and  $\text{Mg}_3\text{N}_2$  ; the number of molecules having nitrogen in negative oxidation state is :   
**(A)** 1                      **(B)** 2                      **(C)** 3                      **(D)** 4
- The reaction,  $\text{P}_4 + 3\text{NaOH} + 3\text{H}_2\text{O} \longrightarrow 3\text{NaH}_2\text{PO}_2 + \text{PH}_3$  is an example of :   
**(A)** disproportionation reaction                      **(B)** neutralisation reaction  
**(C)** double-decomposition reaction                      **(D)** pyrolytic reaction
- The oxidation number of oxygen in  $\text{KO}_3$ ,  $\text{Na}_2\text{O}_2$  is :  
**(A)** 3, 2                      **(B)** 1, 0                      **(C)** 0, 1                      **(D)** -0.33, -1
- The oxidation state of sulphur in sodium tetrathionate ( $\text{Na}_2\text{S}_4\text{O}_6$ ) is :  
**(A)** 2                      **(B)** -2.5                      **(C)** +2.5                      **(D)** 3.5
- Oxidation states of X, Y, Z are +2, + 5 and -2 respectively. Formula of the compound formed by these will be :   
**(A)**  $\text{X}_2\text{YZ}_6$                       **(B)**  $\text{XY}_2\text{Z}_6$   
**(C)**  $\text{X}_5\text{YZ}_6$                       **(D)**  $\text{X}_3\text{YZ}_4$

12. Which of the following chemical reactions depicts the oxidising behaviour of  $\text{H}_2\text{SO}_4$ ? 
- (A)  $2\text{HI} + \text{H}_2\text{SO}_4 \longrightarrow \text{I}_2 + \text{SO}_2 + 2\text{H}_2\text{O}$       (B)  $\text{Ca}(\text{OH})_2 + \text{H}_2\text{SO}_4 \longrightarrow \text{CaSO}_4 + 2\text{H}_2\text{O}$
- (C)  $\text{NaCl} + \text{H}_2\text{SO}_4 \longrightarrow \text{NaHSO}_4 + \text{HCl}$       (D)  $2\text{PCl}_5 + \text{H}_2\text{SO}_4 \longrightarrow 2\text{POCl}_3 + 2\text{HCl} + \text{SO}_2\text{Cl}_2$
13. The oxidation states of iodine in  $\text{HIO}_4$ ,  $\text{H}_3\text{IO}_5$  and  $\text{H}_5\text{IO}_6$  are respectively :
- (A) +1, +3, +7      (B) +7, +7, +3
- (C) +7, +7, +7      (D) +7, +5, +3
14. In which of the following compounds, the oxidation number of iodine is fractional? 
- (A)  $\text{IF}_3$       (B)  $\text{IF}_5$       (C)  $\text{I}_3^-$       (D)  $\text{IF}_7$
15. Oxidation number of 'N' in  $\text{N}_3\text{H}$  (hydrazoic acid) is :
- (A)  $-\frac{1}{3}$       (B) +3      (C) 0      (D) -3