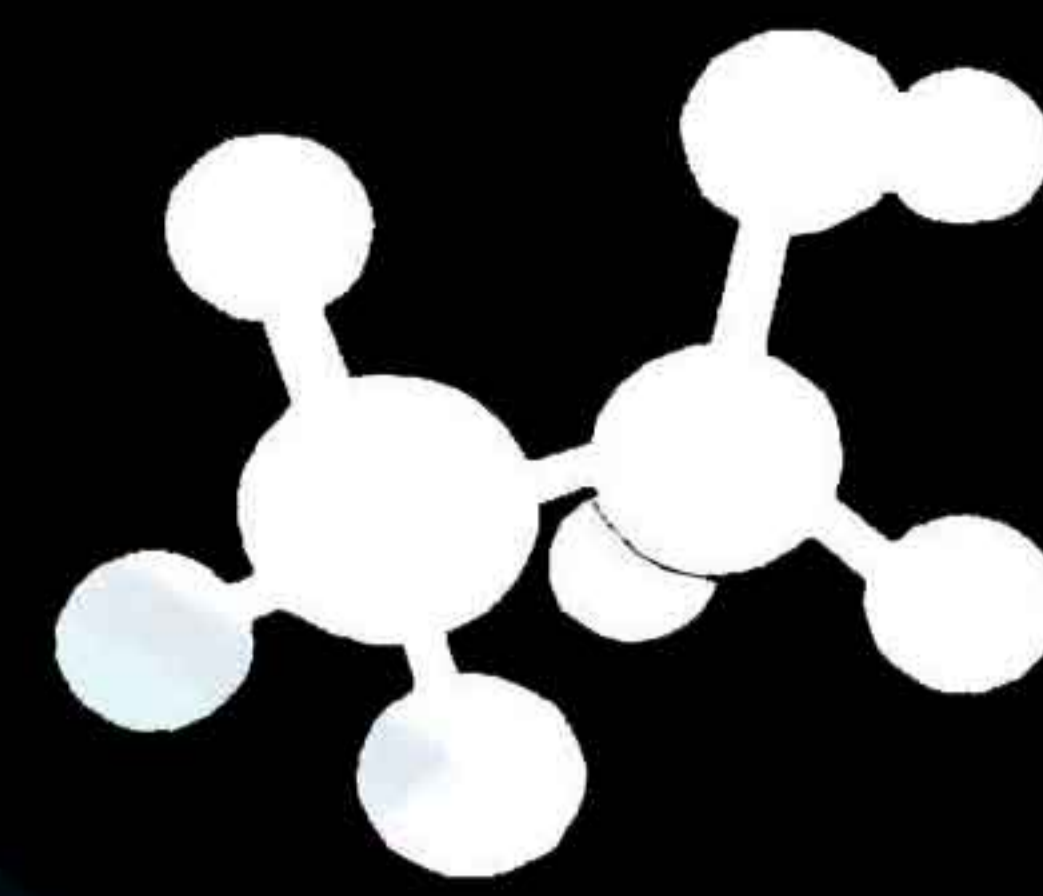




8

Redox Reactions



- Hot concentrated sulphuric acid is a moderately strong oxidizing agent. Which of the following reactions does not show oxidizing behaviour?
 - $\text{Cu} + 2\text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{SO}_2 + 2\text{H}_2\text{O}$
 - $\text{S} + 2\text{H}_2\text{SO}_4 \rightarrow 3\text{SO}_2 + 2\text{H}_2\text{O}$
 - $\text{C} + 2\text{H}_2\text{SO}_4 \rightarrow \text{CO}_2 + 2\text{SO}_2 + 2\text{H}_2\text{O}$
 - $\text{CaF}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + 2\text{HF}$

(NEET-II 2016)
- The pair of compounds that can exist together is
 - $\text{FeCl}_3, \text{SnCl}_2$
 - $\text{HgCl}_2, \text{SnCl}_2$
 - $\text{FeCl}_2, \text{SnCl}_2$
 - FeCl_3, KI

(2014)
- $\text{H}_2\text{O}_2 + \text{O}_3 \rightarrow \text{H}_2\text{O} + 2\text{O}_2$
 - $\text{H}_2\text{O}_2 + \text{Ag}_2\text{O} \rightarrow 2\text{Ag} + \text{H}_2\text{O} + \text{O}_2$

Role of hydrogen peroxide in the above reactions is respectively

 - oxidizing in (I) and reducing in (II)
 - reducing in (I) and oxidizing in (II)
 - reducing in (I) and (II)
 - oxidizing in (I) and (II)

(2014)
- In acidic medium, H_2O_2 changes $\text{Cr}_2\text{O}_7^{2-}$ to CrO_5 which has two (—O—O—) bonds. Oxidation state of Cr in CrO_5 is
 - +5
 - +3
 - +6
 - 10

(2014)
- When Cl_2 gas reacts with hot and concentrated sodium hydroxide solution, the oxidation number of chlorine changes from
 - zero to +1 and zero to -5
 - zero to -1 and zero to +5
 - zero to -1 and zero to +3
 - zero to +1 and zero to -3

(2012)
- A mixture of potassium chlorate, oxalic acid and sulphuric acid is heated. During the reaction which element undergoes maximum change in the oxidation number?
 - S
 - H
 - Cl
 - C

(2012)
- Oxidation numbers of P in PO_4^{3-} , of S in SO_4^{2-} and that of Cr in $\text{Cr}_2\text{O}_7^{2-}$ are respectively
 - +3, +6 and +5
 - +5, +3 and +6
 - 3, +6 and +6
 - +5, +6 and +6

(2009)
- Number of moles of MnO_4^- required to oxidize one mole of ferrous oxalate completely in acidic medium will be
 - 7.5 moles
 - 0.2 moles
 - 0.6 moles
 - 0.4 moles

(2008)
- Which is the best description of the behaviour of bromine in the reaction given below?
 $\text{H}_2\text{O} + \text{Br}_2 \rightarrow \text{HOBr} + \text{HBr}$
 - Proton acceptor only
 - Both oxidised and reduced
 - Oxidised only
 - Reduced only

(2004)
- The oxidation states of sulphur in the anions SO_3^{2-} , $\text{S}_2\text{O}_4^{2-}$ and $\text{S}_2\text{O}_6^{2-}$ follow the order
 - $\text{S}_2\text{O}_4^{2-} < \text{SO}_3^{2-} < \text{S}_2\text{O}_6^{2-}$
 - $\text{SO}_3^{2-} < \text{S}_2\text{O}_4^{2-} < \text{S}_2\text{O}_6^{2-}$
 - $\text{S}_2\text{O}_4^{2-} < \text{S}_2\text{O}_6^{2-} < \text{SO}_3^{2-}$
 - $\text{S}_2\text{O}_6^{2-} < \text{S}_2\text{O}_4^{2-} < \text{SO}_3^{2-}$

(2003)
- Oxidation state of Fe in Fe_3O_4 is
 - $\frac{5}{4}$
 - $\frac{4}{5}$
 - $\frac{3}{2}$
 - $\frac{8}{3}$

(1999)



12. Which of the following is redox reaction?

- (a) Evaporation of H_2O
- (b) Both oxidation and reduction
- (c) H_2SO_4 with $NaOH$
- (d) In atmosphere O_3 from O_2 by lighting.

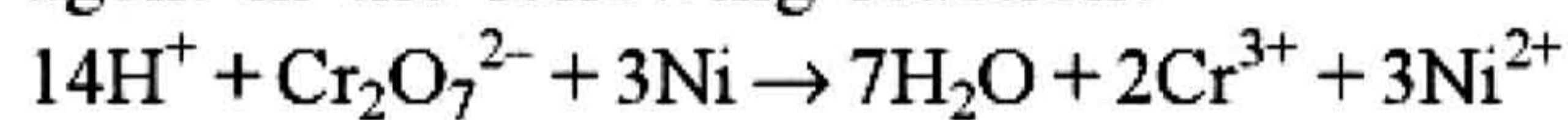
(1997)

13. The oxide, which cannot act as a reducing agent is

- (a) CO_2
- (b) ClO_2
- (c) NO_2
- (d) SO_2

(1995)

14. Which substance is serving as a reducing agent in the following reaction?



- (a) H^+
- (b) $Cr_2O_7^{2-}$
- (c) H_2O
- (d) Ni

(1994)

15. The oxidation state of I in $H_4IO_6^-$ is

- (a) +1
- (b) -1
- (c) +7
- (d) +5

(1994)