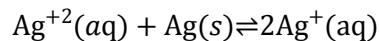


Topic :-REDOX REACTIONS

- Which of the following oxidation state is the most common among the lanthanoides :
a) 4 b) 2 c) 5 d) 3
- 13.5 g aluminium changes to Al^{3+} in solution by losing :
a) 18×10^{23} electrons
b) 6.023×10^{23} electrons
c) 3.01×10^{23} electrons
d) 9×10^{23} electrons
- In CH_2Cl_2 , the oxidation number of C is :
a) -4 b) +2 c) Zero d) +4
- In the compounds KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$, the highest oxidation state is of the element
a) Mn b) K c) O d) Cr
- The oxidation state of nitrogen varies from :
a) -3 to +5 b) 0 to +5 c) -3 to 1 d) +3 to +5
- The oxidation state of hydrogen in CaH_2 is :
a) +1 b) -1 c) Zero d) +2
- The most common oxidation state of an element is -2. The number of electrons present in its outermost shell is :
a) 2 b) 4 c) 6 d) 8
- A good indicator must possess the following characteristics :
a) The colour change should be sharp
b) The colour change should be clear
c) It must be sensitive to the equivalent point
d) All of the above
- The oxidation number of Xe in XeF_4 and XeO_2 is
a) +6 b) +4 c) +1 d) +3
- The oxidation number of arsenic in arsenate is :

- a) +5 b) +4 c) +6 d) +2

11. The reaction,



is an example of

- a) Reduction b) Oxidation c) Disproportionation d) None of these

12. During the presence of SO_3^{2-} and S^{2-} in a mixture, on addition of dil. H_2SO_4 , one notice that:

- a) SO_2 and H_2S are not formed
b) SO_2 and H_2S formed during change undergoes a redox change forming colloidal sulphur and thus, no smell
c) A smell of burning sulphur
d) A smell of rotten egg

13. Which is not an oxidising agent?

- a) KClO_3 b) O_2 c) $\text{C}_6\text{H}_{12}\text{O}_6$ d) $\text{K}_2\text{Cr}_2\text{O}_7$

14. The charge on cobalt in $[\text{Co}(\text{CN})_6]^{3-}$ is :

- a) -6 b) +3 c) -3 d) +6

15. The most stable oxidation state of chromium is :

- a) +5 b) +3 c) +2 d) +4

16. Arrange the following as increase in oxidation number

- (i) Mn^{2+} (ii) MnO_2
(iii) KMnO_4 (iv) K_2MnO_4
a) (i) > (ii) > (iii) > (iv) b) (i) < (ii) < (iv) < (iii) c) (ii) < (iii) < (i) < (iv) d) (iii) > (i) > (iv) > (ii)

17. What mass of MnO_2 is reduced by 35 mL of 0.16 N oxalic acid in acidic solution? The skeleton equation is, $\text{MnO}_2 + \text{H}^+ + \text{H}_2\text{C}_2\text{O}_4 \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{Mn}^{2+}$:

- a) 8.7 g b) 0.24 g c) 0.84 g d) 43.5 g

18. Stronger is oxidising agent, more is;

- a) Standard reduction potential of that species
b) The tendency to get itself oxidised
c) The tendency to lose electrons by that species
d) Standard oxidation potential of that species

19. How many g of KMnO_4 are needed to prepare 3.75 litre of 0.850 N solution if KMnO_4 is reduced as, $\text{MnO}_4^- + 8\text{H}^+ + 5\text{e}^- \rightarrow \text{Mn}^{2+} + 4\text{H}_2\text{O}$?

- a) 101 g b) 202 g c) 50.5 g d) 303.0 g KMnO_4

20. When KMnO_4 is reduced with oxalic acid in acid medium, the oxidation number of Mn changes from:

- a) +7 to +4 b) +6 to +4 c) +7 to +2 d) +4 to +2

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