Arjuna NEET (2024)

Redox Reactions

DPP-01

1. Oxidation is defined as:
(1) Gain of electrons
(2) Decrease in positive valency
(3) Loss of electrons
(4) Addition of electropositive element

2. Reduction is defined as
(1) Increase in positive valency
(2) Gain of electrons
(3) Loss of protons
(4) Decrease in negative valency

3. A redox reaction is
(1) proton transfer reaction
(2) ion combination reaction
(3) a reaction in solution
(4) electron transfer reaction

4. The most common oxidation state of oxygen is –2. This is best explained as due to
(1) 2 electrons in the outermost shell
(2) 4 electrons in the outermost shell
(3) 6 electrons in the outermost shell
(4) 8 electrons in the outermost shell

5. Which of the following involves the reduction of copper?
(1) $Cu(s) + ½O_2(g) \rightarrow CuO(s)$
(2) $Cu^{2+}(aq) + 2I^-(aq) \rightarrow 2CuI(aq)$
(3) $CuCl_2(s) + 2F–(aq) \rightarrow CuF_2 + Cl_2(g)$
(4) $CuO + H_2O \rightarrow Cu(OH)_2$

6. In the reaction $MnO_4^- + SO_3^{2-} + H^+ \rightarrow SO_4^{2-} + Mn^{2+} + H_2O$
(1) MnO_4^- and H^+ both are reduced
(2) MnO_4^- is reduced and H^+ is oxidized
(3) MnO_4^- is reduced and SO_3^{2-} is oxidized
(4) MnO_4^- is oxidized SO_3^{2-} is reduced

7. Which of the following reactions do not involve oxidation reduction?
(1) $2Rb + 2H_2O \rightarrow 2RbOH + H_2$
(2) $2CuI_2 \rightarrow 2CuI + I_2$
(3) $NH_4Cl + NaOH \rightarrow NaCl + NH_3 + H_2O$
(4) $3Mg + N_2 \rightarrow Mg_3N_2$

8. Which compound acts as oxidizing agent only?
(1) SO_2 (2) H_2S
(3) H_2SO_4 (4) HNO_2

9. Which of the following is not a redox reaction?
(1) $MnO_4^- \rightarrow MnO_2 + O_2$
(2) $Cl_2 + H_2O \rightarrow HCl + HClO$
(3) $2CrO_4^{2-} + 2H^+ \rightarrow Cr_2O_7^{2-} + H_2O$
(4) $MnO_4^- + 8H^+ + 5Ag \rightarrow Mn^{+2} + 4H_2O + 5Ag^+$

10. Which of the following act both as oxidant and reductant?
(1) H_2S (2) SO_3
(3) H_2O_2 (4) F_2

11. The reaction $H_2S + H_2O_2 \rightarrow S + 2H_2O$ manifests
(1) Oxidizing action of H_2O_2
(2) Reducing nature of H_2O_2
(3) Acidic nature of H_2O_2
(4) Alkaline nature of H_2O_2

12. Which of the following element never show positive oxidation number?
(1) O (2) Fe
(3) Ga (4) F

13. Oxidation number of oxygen atom in O_3, molecule is
(1) 0 (2) –2
(3) +2 (4) –1/2

14. The oxidation number of Mn in MnO_2 is
(1) +7 (2) +4
(3) +3 (4) 0

15. The oxidation number of Cl in HCl is
(1) –1 (2) +1
(3) 0 (4) Both (1) and (2)

16. Oxidation number of sodium in sodium Amalgamis
(1) +1 (2) 0
(3) –1 (4) +2

17. The oxidation number of phosphorous vary from
(1) –3 to +5
(2) –1 to +1
(3) –3 to +3
(4) –5 to +1

18. The number of peroxide linkages in CrO_5 and H_2SO_5 respectively are
(1) 1, 1 (2) 2, 0
(3) 2, 1 (4) 1, 2

19. Oxidation number of chlorine atoms in $CaOCl_2$ are
(1) 0, 0 (2) –1, –1
(3) –1, +1 (4) –2, +7

20. Chlorine in +3 oxidation number in
(1) HCl
(2) $HClO_4$
(3) ICl
(4) ClF_3

21. In which of the following compounds, the oxidation number of iodine is fractional?
(1) IF_7 (2) I_3^-
(3) IF_5 (4) IF_3

22. Oxidation number of Cr in CrO_5, is
(1) +10 (2) +6
(3) +4 (4) +5

23. The oxidation state of S in $H_2S_2O_8$ is
(1) +7 (2) +6
(3) –6 (4) +4

24. The brown ring complex compound is formulated $[Fe(H_2O)_5NO]SO_4$. The oxidation state of iron is
(1) +1 (2) +2
(3) +3 (4) +6

25. Oxidation numbers of P in PO_4^{3-}, of S in SO_4^{2-} and that of Cr in $Cr_2O_7^{2-}$ are respectively
(1) +3, +6 and +5 (2) +5, +3 and +6
(3) –3, +6 and +6 (4) +5, +6 and +6

26. Arrange the following in the increasing order of oxidation state of Mn
(i) Mn^{2+} (ii) MnO_2
(iii) $KMnO_4$ (iv) K_2MnO_4
(1) (i) > (ii) > (iii) > (iv)
(2) (i) < (ii) < (iv) < (iii)
(3) (ii) < (iii) < (i) < (iv)
(4) (iii) < (i) < (iv) < (ii)

Note: Kindly find the Video Solution of DPPs Questions in the DPPs Section.

Answer Key

1.	(3)	14.	(2)
2.	(2)	15.	(1)
3.	(4)	16.	(2)
4.	(3)	17.	(1)
5.	(2)	18.	(3)
6.	(3)	19.	(3)
7.	(3)	20.	(4)
8.	(3)	21.	(2)
9.	(3)	22.	(2)
10.	(3)	23.	(2)
11.	(1)	24.	(1)
12.	(4)	25.	(4)
13.	(1)	26.	(2)

PW Web/App - https://smart.link/7wwosivoicgd4

Library- https://smart.link/sdfez8ejd80if