ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION-12(CLASS-11)

TOPIC- REDOX EQUILIBRIA

SUBTOPIC- DETERMINATION OF OXIDATION NUMBER

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -27.06.20**

1.1 **The equivalent mass of $KMnO_4$ in acidic medium is expressed in terms of its molecular mass (M) as-**

(a) M/2 (b) M/5 (c) M/3 (d) M/6

Ans. b

1.**2 In which of the following compounds, nitrogen exhibits the minimum oxidation state-**

(a) N_2H_4 (b) NH_3 (c) N_3H (d) NH_2OH

Ans. b

1.3 **Find the oxidation number of Cr in CrO_5-**

(a) +6 (b) +5 (c) +4 (d) +1

Ans. a

1.4 **The transition element having maximum number of oxidation states-**

(a) Ti (b) Cu (c) Mn (d) Cr

Ans. c

1.5 **Which of the following compound contains an atom having fractional oxidation number?**

(a) Pb_3O_4 (b) CO_2 (c) $SnCl_2$ (d) $K_2Cr_2O_7$

Ans. a

1.6 **H_2SO_4 acts as a strong oxidising agent. In which of the reaction, is it not acting as an oxidising agent?**

(a) $C + 2H_2SO_4 \rightarrow CO_2 + 2SO_2 + 2H_2O$ (b) $CaF_2 + 2H_2SO_4 \rightarrow CaSO_4 + 2HF$

(c) $S + 2H_2SO_4 \rightarrow 3SO_2 + H_2O$ (d) $Cu + 2H_2SO_4 \rightarrow CuSO_4 + SO_2 + 2H_2O$

Ans. b

1.7 **Find the oxidation state of Osmium in OsO_4:**

(a) -1 (b) +8 (c) 0 (d) -2

Ans. b

1.8 **Find the n-factor for Oxalic acid-**

(a) 1 b) 2 c) 3 d) 5

Ans. b

1.9 **Which among the following is a reducing agent?**

(a) $K_2Cr_2O_7$ b) $Na_2S_2O_3.5H_2O$ c) $KMnO_4$ d) H_2O_2

Ans. b

1.10 **Among the given compounds, in which the oxidation number of the central atom has the maximum value?**

(a) H_2S (b) HNO_3 (c) $SnCl_2$ (d) H_2SO_3

Ans. b

1.11 **Which among the following is an oxidizing agent?**

(a) $K_2Cr_2O_7$ b) $Na_2S_2O_3.5H_2O$ c) $FeSO_4$ d) H_2S

Ans. a

1.12 **$KMnO_4$ exhibits maximum equivalent mass is-**

(a) Acidic medium b) Basic medium c) Neutral medium d) Both acidic and basic medium

Ans. b

1.13 **Oxidation number of an element-**

(a) Always remains same b) None of these c) can't be predicted d) May change

Ans. b

1.14 **The oxidation number of Cl in $NOClO_4$ is-**

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

Ans. a

1.15 **In which of the following oxidation number of Cr is +6-**

(a) $K_2Cr_2O_7$ b) $Na_3[Cr(CN)_6]$ c) CrO_5 d) H_2SO_3

Ans. c

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