

Date Planned : __ / __ / __	Daily Tutorial Sheet-3	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration : _____

31. The bonds present in the structure of dichromate ion are :
(A) four equivalent Cr – O bonds only
(B) six equivalent Cr – O bonds and one O – O bond
(C) six equivalent Cr – O bonds and one Cr – Cr bond
(D) six equivalent Cr – O bonds and one Cr – O – Cr bond
32. In chromite ore, the oxidation number of iron and chromium are respectively :
(A) +3, +2 **(B)** +3, +6 **(C)** +2, +6 **(D)** +2, +3
33. When dil. H_2SO_4 is added to aqueous solution of potassium chromate, yellow colour of solution turns to orange colour. It indicates.
(A) chromate ions are reduced
(B) chromate ions are oxidised
(C) mono centric complex is converted into dicentric complex
(D) oxygen gets removed from chromate ions
34. KMnO_4 in basic medium is used as :
(A) strong oxidizing agent **(B)** strong reducing agent
(C) strong hydrogenating agent **(D)** poor reducing agent
35. $\text{K}_2\text{Cr}_2\text{O}_7 \xrightarrow{\Delta} \text{K}_2\text{CrO}_4 + \text{O}_2 + \text{X}$. In the above reaction X is :
(A) CrO_3 **(B)** Cr_2O_7 **(C)** Cr_2O_3 **(D)** CrO_5
36. The oxidation number of Mn in the product of alkaline oxidative fusion of MnO_2 is :
(A) 2 **(B)** 3 **(C)** 4 **(D)** 6
37. MnO_4^- reacts with bromide ion in alkaline medium to give.
(A) MnBr_4 **(B)** MnOBr_2 **(C)** $\text{MnO}_2, \text{BrO}_3^{2-}$ **(D)** MnO, BrO
38. KMnO_4 (acidic/alkaline) is not decolourized by :
(A) Mohr salt **(B)** oxalic acid **(C)** benzene **(D)** propene
39. Which do not decolourise KMnO_4 aqueous solution ? 
(A) $\text{C}_2\text{O}_4^{2-}$ **(B)** HSO_3^- **(C)** CO_3^{2-} **(D)** SO_3^{2-}
40. When hydrogen peroxide is added to acidified potassium dichromate, a blue colour is produced due to formation of : 
(A) CrO_3 **(B)** Cr_2O_3 **(C)** CrO_5 **(D)** CrO_4^{2-}
41. Potassium permanganate acts as an oxidant in alkaline and acidic media. The final products formed from KMnO_4 in the two conditions are respectively :
(A) MnO_4^{2-} and Mn^{3+} **(B)** Mn^{3+} and Mn^{2+}
(C) Mn^{2+} and Mn^{3+} **(D)** MnO_2 and Mn^{2+}

42. KMnO_4 in basic medium is reduced to :

- (A) K_2MnO_4 (B) MnO_2 (C) Mn(OH)_2 (D) Mn^{2+}

43. $\text{K}_2\text{Cr}_2\text{O}_7 \xrightarrow{\Delta} \text{K}_2\text{CrO}_4 + 3\text{O}_2 + \text{X}$



Identify correct statement for above reaction :

- (A) It is a non-redox reaction (B) $\text{K}_2\text{Cr}_2\text{O}_7$ is green coloured
(C) Compound X is green coloured (D) $\text{K}_2\text{Cr}_2\text{O}_7$ is orange coloured

44. CrO_3 dissolves in aqueous NaOH to give :

- (A) CrO_4^{2-} (B) Cr(OH)_3^- (C) $\text{Cr}_2\text{O}_7^{2-}$ (D) Cr(OH)_2

45. Which of the following is the green coloured powder produced when ammonium dichromate is used in fire works ?

- (A) Cr (B) CrO_3 (C) Cr_2O_3 (D) $\text{CrO(O}_2\text{)}$