

**AIPMT 2009**

1. Oxidation numbers of P in  $\text{PO}_4^{3-}$ , of S in  $\text{SO}_4^{2-}$  and that of Cr in  $\text{Cr}_2\text{O}_7^{2-}$  are respectively :-  
 (1) -3, +6 and +6 (2) +5, +6 and +6  
 (3) +3, +6 and +5 (4) +5, +3 and +6

**AIPMT Pre. 2012**

2. When  $\text{Cl}_2$  gas reacts with hot and concentrated sodium hydroxide solution, the oxidation number of chlorine changes from:  
 (1) Zero to -1 and zero to +3  
 (2) Zero to +1 and zero to -3  
 (3) Zero to +1 and zero to -5  
 (4) Zero to -1 and zero to +5
3. In which of the following compounds, nitrogen exhibits highest oxidation state?  
 (1)  $\text{N}_3\text{H}$  (2)  $\text{NH}_2\text{OH}$   
 (3)  $\text{N}_2\text{H}_4$  (4)  $\text{NH}_3$

**AIPMT 2014**

4. The reaction of aqueous  $\text{KMnO}_4$  with  $\text{H}_2\text{O}_2$  in acidic conditions gives :-  
 (1)  $\text{Mn}^{4+}$  and  $\text{O}_2$  (2)  $\text{Mn}^{2+}$  and  $\text{O}_2$   
 (3)  $\text{Mn}^{2+}$  and  $\text{O}_3$  (4)  $\text{Mn}^{4+}$  and  $\text{MnO}_2$

**RE-AIPMT 2015**

5. Assuming complete ionization, same moles of which of the following compounds will require the least amount of acidified  $\text{KMnO}_4$  for complete oxidation?  
 (1)  $\text{FeC}_2\text{O}_4$  (2)  $\text{Fe}(\text{NO}_2)_2$   
 (3)  $\text{FeSO}_4$  (4)  $\text{FeSO}_3$

**NEET-II 2016**

6. Hot concentrated sulphuric acid is a moderately strong oxidizing agent. Which of the following reactions does not show oxidizing behaviour ?  
 (1)  $\text{C} + 2\text{H}_2\text{SO}_4 \rightarrow \text{CO}_2 + 2\text{SO}_2 + 2\text{H}_2\text{O}$   
 (2)  $\text{CaF}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + 2\text{HF}$   
 (3)  $\text{Cu} + 2\text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{SO}_2 + 2\text{H}_2\text{O}$   
 (4)  $3\text{S} + 2\text{H}_2\text{SO}_4 \rightarrow 3\text{SO}_2 + 2\text{H}_2\text{O}$

**NEET(UG) 2018**

7. For the redox reaction  
 $\text{MnO}_4^- + \text{C}_2\text{O}_4^{2-} + \text{H}^+ \longrightarrow \text{Mn}^{2+} + \text{CO}_2 + \text{H}_2\text{O}$   
 the correct coefficients of the reactants for the balanced equation are  

	$\text{MnO}_4^-$	$\text{C}_2\text{O}_4^{2-}$	$\text{H}^+$
(1)	16	5	2
(2)	2	5	16
(3)	2	16	5
(4)	5	16	2

**NEET(UG) 2019**

8. Which of the following reactions are disproportionation reaction ?  
 (a)  $2\text{Cu}^+ \rightarrow \text{Cu}^{2+} + \text{Cu}^0$   
 (b)  $3\text{MnO}_4^{2-} + 4\text{H}^+ \rightarrow 2\text{MnO}_4^- + \text{MnO}_2 + 2\text{H}_2\text{O}$   
 (c)  $2\text{KMnO}_4 \xrightarrow{\Delta} \text{K}_2\text{MnO}_4 + \text{MnO}_2 + \text{O}_2$   
 (d)  $2\text{MnO}_4^- + 3\text{Mn}^{2+} + 2\text{H}_2\text{O} \rightarrow 5\text{MnO}_2 + 4\text{H}^+$   
 Select the **correct** option from the following :-  
 (1) (a) and (b) only (2) (a), (b) and (c)  
 (3) (a), (c) and (d) (4) (a) and (d) only

**NEET (UG) 2020**

9. What is the change in oxidation number of carbon in the following reaction ?  
 $\text{CH}_4(\text{g}) + 4\text{Cl}_2(\text{g}) \rightarrow \text{CCl}_4(\text{l}) + 4\text{HCl}(\text{g})$   
 (1) 0 to -4 (2) +4 to +4  
 (3) 0 to +4 (4) -4 to +4

Que.	1	2	3	4	5	6	7	8	9	
Ans.	2	4	1	2	3	2	2	1	4	