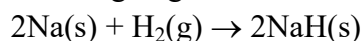


**CHEMISTRY****Redox Reactions****Redox Reactions in Terms of Electron Transfer Reaction**

1. In the reaction given below, identify the species undergoing redox reaction,



- (1) Na is reduced and hydrogen is oxidised
- (2) Na is oxidised and hydrogen is reduced
- (3) Na undergoes oxidation and hydrogen undergoes reduction
- (4) Both (2) and (3)

2. Match the columns

|     | Column I   |     | Column II                                     |
|-----|--|-----|---|
| (A) | $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$  | (p) | Removal of hydrogen                           |
| (B) | $\text{Mg} + \text{Cl}_2 \rightarrow \text{MgCl}_2$  | (q) | Removal of electropositive element            |
| (C) | $2\text{H}_2\text{S} + \text{O}_2 \rightarrow 2\text{S} + 2\text{H}_2\text{O}$                   | (r) | Addition of oxygen                            |
| (D) | $2\text{KI} + \text{H}_2\text{O} + \text{O}_3 \rightarrow 2\text{KOH} + \text{I}_2 + \text{O}_2$ | (s) | Addition of electronegative element, chlorine |

- (1) A-(s), B-(q), C-(p), D-(r)
- (2) A-(r), B-(s), C-(p), D-(q)
- (3) A-(s), B-(r), C-(q), D-(p)
- (4) A-(r), B-(p), C-(s), D-(q)

3. When  $\text{Sn}^{2+}$  changes to  $\text{Sn}^{4+}$  in a reaction

- (1) It loses two electrons
- (2) It gains two electrons
- (3) It loses two protons
- (4) It gains two protons

4. The number of electrons involved in the reduction of one nitrate ion to hydrazine is

- (1) 8
- (2) 5
- (3) 3
- (4) 7

5. In which of the following reactions, there is no change in valency?

- (1)  $4\text{KClO}_3 \rightarrow 3\text{KClO}_4 + \text{KCl}$
- (2)  $\text{SO}_2 + 2\text{H}_2\text{S} \rightarrow 2\text{H}_2\text{O} + 3\text{S}$
- (3)  $\text{BaO}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + \text{H}_2\text{O}_2$
- (4)  $3\text{BaO} + \text{O}_2 \rightarrow 2\text{BaO}_2$

6. If rod of a metal is put in a metal ion solution which is blue in colour, solution turn colourless. The metal rod and solution respectively are?

- (1) Zinc and Cu(II)
- (2) Zinc and Ni(II)
- (3) Aluminium and Cu(II)
- (4) Both (1) and (3)

**Classical Idea of Redox Reactions – Oxidation and Reduction Reaction**

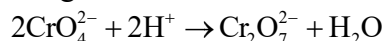
7. In the balanced equation,



the moles of  $\text{CO}_2$  formed are

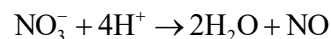
- (1) 2
- (2) 4
- (3) 5
- (4) 10

8. Which one is the oxidising agent in the reaction given below?



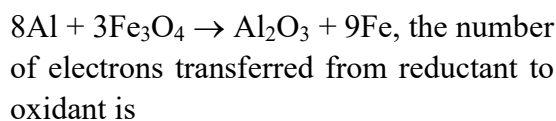
- (1)  $\text{H}^+$
- (2)  $\text{Cr}_2\text{O}_7^{2-}$
- (3)  $\text{Cr}^{2+}$
- (4) None

9. The number of electrons required to balance the following equation are



- (1) 2 on right side
- (2) 3 on left side
- (3) 3 on right side
- (4) 5 on left side

10. In the reaction,



- (1) 8
- (2) 4
- (3) 16
- (4) 24