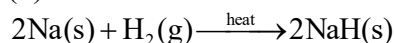


**CHEMISTRY****Redox Reactions****Redox Reactions in Terms of Electron Transfer Reaction**

1. (4)



With the careful application of the concept of electronegativity, we can find that sodium is oxidised and hydrogen is reduced.

2. (2)

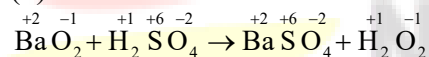
3. (1)

$\text{Sn}^{2+} \rightarrow \text{Sn}^{4+} + 2\text{e}^-$ . In this reaction  $\text{Sn}^{2+}$  change in  $\text{Sn}^{4+}$  it is called an oxidation reaction.

4. (4)

$\text{NO}_3^- \rightarrow \text{N}_2\text{H}_4$ . So, for reduction of 1 mole of  $\text{NO}_3^-$ , number of electrons required is 7.

5. (3)



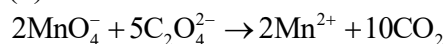
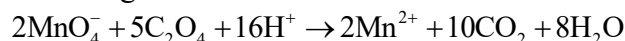
In this reaction, none of the elements undergoes a change in oxidation number or valency.

6. (4)

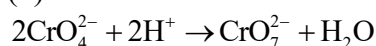
Reduction potential of Cu(II) is greater than that of Zn(II) and Al(III) thus can be easily replaced by these ions. Moreover, solution of copper is blue in colour.

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

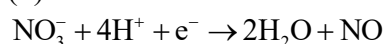
7. (4)

Balancing O  $\rightarrow 8 \rightarrow \text{H}_2\text{O}$ Balancing  $\rightarrow \text{H} \rightarrow 16\text{H}^+$ 

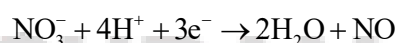
8. (1)

Here  $\text{Cr}^{2+}$  is converting into  $\text{Cr}^{+6}$  $\text{CrO}_4^{2-}$  is a reducing agent $\text{Cr}_2\text{O}_7^{2-} \rightarrow \text{Cr}$  is in +6 oxidation state $\text{Cr}_2\text{O}_7^{2-} \rightarrow$  will act as an oxidising agent

9. (3)



Reduction half-reaction



10. (4)



Al is reductant, Fe is oxidant

Oxidation number of Al in transition state = 0

Oxidation number of Al in  $\text{Al}_2\text{O}_3 = +3$ Number of electrons transferred by 8Al atoms =  $8 \times 3 = 24$  electrons