## **Yakeen NEET 2.0 2026**

## Physical Chemistry By Amit Mahajan Sir Redox Reaction

DPP: 2

Q1 Following reaction describes the rusting of iron  $4 Fe + 3 O_2 \rightarrow 4 Fe^{3+} + 6 O^{2-}$ 

Which one of the following statement is incorrect?

- (A) This is an example of a redox reaction
- (B) Metallic iron is reduced to  ${\rm Fe}^{3+}$
- (C)  $\mathrm{Fe}^{3+}$  is an oxidizing agent
- (D) Metallic iron is a reducing agent
- **Q2** ASSERTION & REASON

Assertion (A): A substance which gets reduced can act as an oxidising agent.

Reason (R): In the reaction,

 $3{
m ClO}^ightarrow {
m ClO}_3^- + 2{
m Cl}^-, {
m Cl}$  atom is oxidised as well as reduced.

Choose the correct option.

- (A) Both Assertion (A) and Reason (R) are True and the Reason (R) is a correct explanation of the Assertion (A).
- (B) Both Assertion (A) and Reason (R) are True but Reason (R) is not a correct explanation of the Assertion (A).
- (C) Assertion (A) is True but the Reason (R) is False.
- (D) Assertion (A) is False but Reason (R) is True.
- Q3 In the reaction given below, identify the species undergoing redox reaction

$$2 \operatorname{Na}(s) + \operatorname{H}_2(g) \longrightarrow 2 \operatorname{NaH}(s)$$

- (A) Na is reduced and hydrogen is oxidised
- (B) Na is oxidised and hydrogen is reduced
- (C) Na undergoes oxidation and hydrogen undergoes reduction

- (D) Both B and C
- Q4 In a reaction

$$2\mathrm{Ag} + 2\mathrm{H}_2\mathrm{SO}_4 o \mathrm{Ag}_2\mathrm{SO}_4 + 2H_2\mathrm{O} + \mathrm{SO}_2$$
,  $\mathrm{H}_2\mathrm{SO}_4$  acts as;

- (A) Reducing agent
- (B) Oxidising agent
- (C) Dehydrate agent
- (D) None of these
- **Q5** In the reaction,  $2 \mathrm{KMnO_4} + 16 \mathrm{HCl} 
  ightarrow$  $2KCl + 2MnCl_2 + 8H_2O + 5Cl_2$ the reduction product is:
  - (A)  $Cl_2$
  - (B) KCl
  - (C) MnCl<sub>2</sub>
  - $(D) H_2 O$
- Q6 For the unbalanced reaction

 $AX + BY + H_2O \rightarrow HA + OY + X_2B$ . Let the oxidation number of X be -2 and  $X, H_2O$ are not involved in redox reaction. The element(s) undergoing oxidation is:

(A) A

(B) B

(C) Y

- (D) Both B and Y
- Q7 Assertion (A): A substance which gets reduced can act as an oxidising agent.

Reason (R): In the reaction,

- $3\,\mathrm{ClO}^- o \mathrm{ClO}_3^- + 2\,\mathrm{Cl}^-, \mathrm{Cl}$  atom is oxidised as well as reduced.
- (A) Both Assertion (A) and Reason (R) are True and the Reason (R) is a correct explanation of the Assertion (A).

- (B) Both Assertion (A) and Reason (R) are True but Reason (R) is not a correct explanation of the Assertion (A).
- (C) Assertion (A) is True but the Reason (R) is False.
- (D) Assertion (A) is False but Reason (R) is True.
- Q8 Which reaction does not involve neither oxidation nor reduction?

(A) 
$$VO^{2+} 
ightarrow V_2O_3$$

(B) 
$$\mathrm{Na} 
ightarrow \mathrm{Na}^+$$

(C) 
$$\mathrm{CrO}_4^{2-} 
ightarrow \mathrm{Cr}_2 \ \mathrm{O}_7^{2-}$$

(D) 
$$\mathrm{Zn}^{2+} 
ightarrow \mathrm{Zn}$$

Q9 In which of the following reactions, there is no change in valency?

(A) 
$$4\text{KClO}_3 \rightarrow 3\text{KClO}_4 + \text{KCl}$$

(B) 
$$\mathrm{SO}_2 + 2\mathrm{H}_2\ \mathrm{S} \rightarrow 2\mathrm{H}_2\mathrm{O} + 3\ \mathrm{S}$$

(C) 
$$\mathrm{BaO_2} + \mathrm{H_2SO_4} \rightarrow \mathrm{BaSO_4} + \mathrm{H_2O_2}$$

(D) 
$$3\mathrm{BaO} + \mathrm{O}_2 o 2\mathrm{BaO}_2$$

Q10 Which of the following is not an example of redox reaction?

(A) 
$$\mathrm{CuO} + \mathrm{H_2} \rightarrow \mathrm{Cu} + \mathrm{H_2O}$$

(B) 
$$\mathrm{Fe_2\,O_3} + \mathrm{3CO} \rightarrow \mathrm{2Fe} + \mathrm{3\,CO_2}$$

(C) 
$$2~\mathrm{K} + \mathrm{F}_2 \rightarrow 2~\mathrm{KF}$$

(D) 
$$BaCl_2 + H_2 SO_4 \rightarrow BaSO_4 + 2 HCl$$

## **Answer Key**

Q1	(B)	Q6	(D)
Q2	(B)	<b>Q</b> 7	(B)
Q3	(D)	Q8	(C)
Q4	(B)	Q9	(C)
Q5	(C)	Q6 Q7 Q8 Q9 Q10	(D)

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