

# DPP

DAILY PRACTICE PROBLEMS

CLASS : XII<sup>th</sup>  
DATE :

SOLUTION

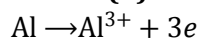
SUBJECT : CHEMISTRY  
DPP NO. : 8

## Topic :-REDOX REACTIONS

1 (d)

It is a fact.

2 (d)



Thus, 27 g Al forms  $\text{Al}^{3+}$  by losing  $3N$  electrons

$$\therefore 13.5 \text{ g Al will lose } \frac{3N \times 13.5}{27} = \frac{3}{2} N \text{ electrons}$$

3 (c)

$$a + 2 \times 1 + 2 \times (-1) = 0$$

$$\therefore a = 0$$

4 (a)

Mn has +7 oxidation state in  $\text{KMnO}_4$ .

$$1 + x + 4(-2) = 0$$

$$1 + x - 8 = 0$$

$$x = +7$$

5 (a)

Minimum ox.no. = group no. - 8.

Maximum ox.no. = group no.

6 (b)

H possesses negative one value of oxidation number in ionic hydrides.

7 (c)

Due to -ve oxidation number it should be non-metal having six electrons in outer shell.

8 (d)

These are characteristics of indicator.

9 (b)

The oxidation state of Xe in both  $\text{XeO}_2$  and  $\text{XeF}_4$  is 4.

$$\begin{array}{l} \text{XeO}_2 \quad \text{XeF}_4 \\ x + 2(-2) = 0 \quad x + 4(-1) = 0 \\ x = 4 \quad x = 4 \end{array}$$

10 (a)

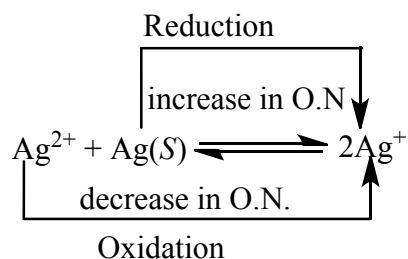
$\text{Na}_3\text{AsO}_4$  is sodium arsenate

Or  $\text{AsO}_4^{-3}$  is arsenate.

$$\text{Thus, } a + 4 \times (-2) = -3$$

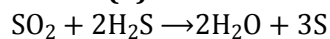
$$\therefore a = +5$$

11 (d)



Hence, those reactions in which two or more species undergo oxidation as well as reduction are called comproportionation.

12 (b)



13 (c)

Glucose is reducing agent.

14 (b)

$$a + 6 \times (-1) = -3$$

$$\therefore a = +3$$

15 (b)

It is a fact.

16 (b)

1. Oxidation state of Mn in  $\text{Mn}^{2+} = +2$

2. Let oxidation state of Mn in  $\text{MnO}_2 = x$

$$\therefore x + (2 \times -2) = 0$$

$$\therefore x = +4$$

(iii) Let the oxidation state of Mn in  $\text{KMnO}_4 = x$

$$\therefore +1 + x + (-2 \times 4) = 0$$

$$\therefore x = +7$$

(iv) Let oxidation state of Mn in  $\text{K}_2\text{MnO}_4 = x$

$$\therefore (+1 \times 2) + x + (-2 \times 4) = 0$$

$$\therefore x = +6$$

$\therefore$  Increasing order of oxidation states is

(i) < (ii) < (iv) < (iii)

17 (b)

Meq. of  $\text{MnO}_2 = \text{Meq. of oxalic acid}$

$$= 0.16 \times 35 = 56$$

$$\therefore \frac{w}{87/2} \times 1000 = 5.6$$

$$w_{\text{MnO}_2} = 0.24 \text{ g}$$

18     **(a)**

More is  $E_{RP}^0$ , more is the tendency to get itself reduced or more is oxidising power.

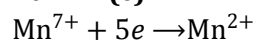
19     **(a)**

$$\text{Meq. of KMnO}_4 = 3750 \times 0.85$$

$$\therefore \frac{w}{31.6} \times 1000 = 3750 \times 0.85$$

$$\therefore w = 100.7 \text{ g}$$

20     **(c)**



PE

**ANSWER-KEY**

Q.	1	2	3	4	5	6	7	8	9	10
A.	D	D	C	A	A	B	C	D	B	A
Q.	11	12	13	14	15	16	17	18	19	20
A.	D	B	C	B	B	B	B	A	A	C

PE