DPP
DAILY PRACTICE PROBLEMS
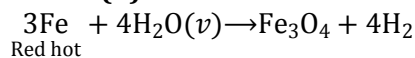
CLASS : XIIth
DATE :

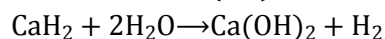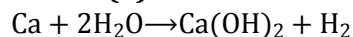**SOLUTION**

SUBJECT : CHEMISTRY
DPP NO. : 4

Topic :-HYDROGEN

1   **(d)**
$\underset{\text{Red hot}}{3Fe} + 4H_2O(v) \longrightarrow Fe_3O_4 + 4H_2$

2   **(b)**
$Ca + 2H_2O \longrightarrow Ca(OH)_2 + H_2$
$CaH_2 + 2H_2O \longrightarrow Ca(OH)_2 + H_2$

3   **(b)**
Atomic mass of helium ($_2He^4$) is maximum.

4   **(b)**
$M = \frac{5.1 \times 1000}{34 \times 100} = 1.5$

5   **(a)**
Hg is placed below H in electrochemical series.

6   **(d)**
Deionised or demineralised water is obtained by passing hard water through both cation and anion exchangers one after the other

7   **(a)**
Eq.wt.of $H_2O_2 = 17$

$N = \frac{30.36}{17} = 1.78\,N$

Volume strength $= 5.6 \times$ normality

$$= 5.6 \times 1.78 = 10\,V$$

8   **(c)**
It is a fact.

9   **(d)**
Water becomes hard when it contains dissolved salts of calcium, Mg of Fe such as chloride, sulphates, bicarbonates and carbonates.
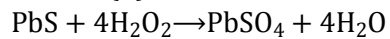
10   **(a)**
In tritium, it is three.

11   **(b)**

It is a fact.

12   **(a)**

Hydrogen reacts with active metals (like alkali and alkaline earth metals) form corresponding hydrides. $Ca(s) + H_2(g) \rightarrow CaH_2$

13   **(b)**

$PbS + 4H_2O_2 \rightarrow PbSO_4 + 4H_2O$

14   **(a)**

Per cent conc. of $H_2O_2 = \frac{17}{56} \times$ volume conc. of $H_2O_2 = \frac{17}{56} \times 10 = 3\%$ app.
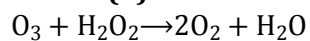
16   **(d)**

First three choices are characteristics of zeolites.

19   **(b)**

Extra energy is required to break these hydrogen bonds.

20   **(d)**

$O_3 + H_2O_2 \rightarrow 2O_2 + H_2O$

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