

DPP

DAILY PRACTICE PROBLEMS

CLASS : XIIth
DATE :

SOLUTION

SUBJECT : CHEMISTRY
DPP NO. : 5

Topic :-HYDROGEN

1 (b)

Water has high dielectric constant, *ie*, 82, high liquid range and can dissolve maximum number of compounds. That's why it is used as universal solvent

2 (c)

Sodium zeolite is used for softening of water having the formula $\text{Na}_2\text{Al}_2\text{Si}_2\text{O}_8$.

3 (d)

Nascent hydrogen, (i.e., hydrogen at the moment of generation) is more powerful reducing agent than ordinary H_2 .

4 (a)

It is a fact.

5 (c)

H_2O_2 easily decomposes into water and oxygen and the decomposition speeds up in the presence of metallic impurities, or strong bases and on exposure to light. Hence, it is stored in plastic container after addition of stabilizer.

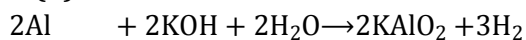
6 (c)

It is a fact.

7 (d)

It is a method to concentrate H_2O_2 .

8 (d)



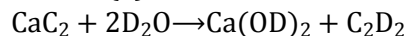
(Uyeno's methods)

$\text{NaH} + \text{H}_2\text{O} \rightarrow \text{NaOH} + \text{H}_2$ and electrolysis of $\text{Ba}(\text{OH})_2$. These all are methods to prepared pure H_2 .

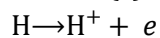
9 (b)

It is a fact.

10 (a)



11 (c)



12 (a)

H_2O_2 is di-basic acid and thus, less stable in basic medium.

14 (a)

'20 volume H_2O_2 ' means that 1mL of this H_2O_2 gives 20mL oxygen on decomposition at STP.

$$\begin{aligned}\text{Hence, } 5000 \text{ cm}^3 \text{ O}_2 \text{ will be obtained by } &= \frac{5000}{20} \\ &= 250 \text{ cm}^3\end{aligned}$$

15 **(a)**

Ice \rightleftharpoons Water; Also volume of ice > volume of water. Thus, an increase in pressure favours the forward reaction.

16 **(c)**

D_2O was discovered by Urey and Wash burn.

17 **(d)**

It is a fact.

18 **(b)**

An important property of H_2O_2 .

19 **(d)**

Stannic and ferric oxides are reduced to stannous and ferrous oxides; Cu^{2+} to Cu.

20 **(a)**

Ortho and *para* hydrogens are two forms of hydrogen which differ only in direction of spin of proton.

Protium (${}^1_1\text{H}$), deuterium (${}^2_1\text{D}$) and tritium (${}^3_1\text{T}$) are three isotopes of hydrogen. All of them have one proton and electron each. Protium has no neutron, deuterium has one neutron and tritium has two neutrons.

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

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