

CLASS : XIIth

DATE :

SUBJECT : CHEMISTRY

DPP NO. :4

Topic :-HYDROGEN

- Metal which does not react with cold water but evolves H_2 with steam is:
a) Na b) K c) Pt d) Fe
- The pair that yields the same gaseous product on reaction with water:
a) K and KO_2 b) Ca and CaH_2 c) Na and Na_2O_2 d) Ba and BaO_2
- The heaviest among the following is:
a) Deuterium b) Helium c) Tritium d) Hydrogen
- The molarity of a 100 mL solution containing 5.1 g of hydrogen peroxide is:
a) 0.15 M b) 1.5 M c) 3.0 M d) 50.0 M
- The metal that does not displace hydrogen from an acid is:
a) Hg b) Zn c) Al d) Ca
- Deionised water is obtained by passing hard water through
a) Anion exchanger b) Zeolite
c) Cation exchanger d) Both anion and cation exchanger
- The strength in volumes of a solution containing 30.36 g/L of H_2O_2 is
a) 10 V b) 5 V c) 20 V d) None of these
- Hydrogen was discovered by:
a) Scheele b) Berzelius c) Cavendish d) Priestley
- Hard water becomes free from ions when passed through ion exchange resin containing R COOH groups.
a) Cl^- b) SO_4^{2-} c) H_3O^+ d) Ca^{2+}
- The sum of number of neutrons and protons in one of the isotopes of hydrogen is:
a) 3 b) 4 c) 5 d) 6
- Water contracts on heating:
a) To $100^\circ C$ b) From $0^\circ C$ to $4^\circ C$ c) To 273 K d) From $10^\circ C$ to $20^\circ C$

12. Hydrogen combines directly with:
a) Ca b) Cu c) Zn d) Fe
13. H_2O_2 restores the colour of old lead paintings, blackened by the action of H_2S gas, by:
a) Converting PbO_2 to Pb
b) Oxidising PbS to PbSO_4
c) Converting PbCO_3 to Pb
d) Oxidising PbSO_3 to PbSO_4
14. 10 volumes of H_2O_2 has a strength of approximately:
a) 3% b) 30% c) 10% d) 5%
15. Ammonium persulphate solution on heating under reduced pressure gives:
a) H_2O_2 b) O_2 c) H_2 d) $(\text{NH}_4)_2\text{SO}_4$
16. Which statement about zeolite is false?
a) They are used as cation exchanger
b) They have open structure which enables them to take up small molecules
c) Zeolites are aluminosilicates having three dimensional network
d) Some of the SiO_4^{4-} units are replaced by AlO_4^{5-} and AlO_6^{9-} ions in zeolites
17. Which of the following metal evolves hydrogen on reacting with cold dilute HNO_3 ?
a) Fe b) Cu c) Al d) Mg
18. The reaction of water with sodium and potassium is
a) Endothermic b) Reversible
c) Exothermic d) Irreversible and endothermic
19. High boiling point of water is due to:
a) Its high specific heat
b) Hydrogen bonding
c) High dielectric constant
d) Low dissociation constant
20. Ozone reacts with H_2O_2 to give oxygen. One volume of ozone gives:
a) One volume of oxygen
b) Half volume of oxygen
c) 1.5 volume of oxygen
d) Two volumes of oxygen