Numerical Value Type	DTS-11

126.(6) Total six types of molecules of water are possible.

127.(4) In tritium atom one proton, one electron and two neutrons are present.

128.(30) '10 volume' H_2O_2 sample $= 10\,ml$ of oxygen at STP are produced from 1 ml of '10 volume H_2O_2 sample' of H_2O_2 solution.

$2H_2O_2 \longrightarrow 2H_2O + O_2$

68 gm 22400 ml

1 ml of oxygen is obtained from $= \frac{68}{22400} \times 10 = 0.03\,gm\ H_2O_2$

1 ml of H_2O_2 solution contains $= 0.03\,gm\ H_2O_2$

100 ml of H_2O_2 solution contains $= 3\,gm\ H_2O_2$

Strength $= 30\,gm/L$

129.(560)

$Ca(HCO_3)_2 + CaO \longrightarrow 2CaCO_3 + H_2O + CO_2$

162 g 56 g

$162\,g\ Ca(HCO_3)_2 = 56\,g$ of CaO

$1\,g\ Ca(HCO_3)_2 = \frac{56}{162}\,gm$ of CaO

$1620\,gm\ Ca(HCO_3)_2 = \frac{56}{162} \times 1620\,gm \Rightarrow 560\,gm$

130.(1) Li_2CO_3 decomposes while K_2CO_3 is stable and does not decompose

$Li_2CO_3 \longrightarrow Li_2O + CO_2$

1 mole 1 mole

131.(6) **(1)** $CaSO_4 \cdot \frac{1}{2}H_2O$ or $2CaSO_4 \cdot H_2O$ (P.O.P); x = 2

(2) $CaSO_4 \cdot 2H_2O$ (gypsum); y = 4

132.(4) $KO_2^{-1/2} + H_2O^{-2} \longrightarrow KO^{-2}H + H_2O_2^{-1} + O_2^0$

133.(2) $CaC_2 + H_2O \longrightarrow C_2H_2 + Ca(OH)_2$

$Mg_2C_3 + H_2O \longrightarrow C_3H_4 + Mg(OH)_2$

$Be_2C + H_2O \longrightarrow Be(OH)_2 + CH_4$

134.(4) Second period element can form maximum four bonds.

135.(120) Atomic number of last element is 118 and it is group 18th element.

136.(1) $4Li + O_2 \longrightarrow 2Li_2O$

Other metals form peroxide and super oxide under normal condition.

137.(2) Electron precise compounds have the required number of electrons to write their conventional Lewis dot structure. Group 14 form such compound which are tetrahedral in geometry.

138.(4) Single molecule of water can make four H-bonds.

139.(8) $Na_2CO_3 \cdot 10H_2O \xrightarrow{375K} Na_2CO_3 \cdot H_2O + 9H_2O$

$Y = 9$

$X = 1$

$Y - X = 8$

140.(2) Compound of lithium are more covalent and has higher lattice energy. Only 3 & 4 are correct