NEW STANDARD ACADEMY

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CLASS 11 (CHEMISTRY) DPP:-3

1. Which pair of species has the same percentage composition?
   a) $C_6H_{12}O_6$ and $C_{12}H_{22}O_{11}$
   b) $C_6H_{12}O_6$ and CH_3COOH
   c) C_2H_5OH and CH_3COOH
   d) $C_{12}H_{22}O_{11}$ and $HCOOCH_3$

2. A container contains 0.32 g of O_2 and the same volume of an unknown gas at the same T and P weighting 0.26g. If the gas contains only C and H in the ratio 1:1 its molecular formula will be
   a) C_4H_4
   b) C_2H_2
   c) C_6H_6
   d) $C_{10}H_{10}$

3. Law of reciprocal proportions was established by
   a) Lavoisier
   b) Proust
   c) Dalton
   d) Richter

4. How many moles of lead (II) chloride will be formed from a reaction between 6.5 g of PbO and 3.2 g of HCl?
   a) 0.333
   b) 0.011
   c) 0.044
   d) 0.029

5. An element X has the following isotopic composition
   :$200_{X(90\%)}, 199_{X(8.0\%)}, 202_{X(2.0\%)}$
   The weighted average atomic mass of the naturally occurring element X is closest to
   a) 202 amu
   b) 200 amu
   c) 199 amu
   d) 201 amu

6. What is the equivalent weight of phosphoric acid(H_3PO_4) according to the equation
   $NaOH + H_3PO_4 \longrightarrow NaH_2PO_4 + H_2O$

   a) 98 u   b) 59 u   c) 49 u   d) 25u

7. Among (i) $FeSO_4.7H_2O$, (ii)$CuSO_4.5H_2O$, (iii) $ZnSO_4.7H_2O$, and (iv) $MnSO_4.4H_2O$,   isomorphous salts are
   a) (i) and (ii)
   b) (i) and (iv)
   c) (i) and (iii)
   d) (iii) and (ii)

8. If oxygen is present in 1 L flask at a pressure of 7.6×10^{-10} mm Hg, then the number of oxygen molecules in the flask at $0°c$ will be
   a) 0.27×10^{10}
   b) 0.027×10^{10}
   c) 2.7×10^{10}
   d) 27×10^{10}

9. In the reaction $Zn(s) + 2H^+(aq) \longrightarrow Zn^{2+}(aq) + H_2(g)$, how many liters of hydrogen gas measured at STP is produced when 6.54g of Zn is used (Zn =65.4u)?
   a) 22.4 L
   b) 11.2 L
   c) 2.24 L
   d) 1.12 L

10. How many significant figures should be there in the answer of $\frac{(1.79 \times 10^5)(29.2 - 20.2)}{1.39}$
    a) 3
    b) 1
    c) 4
    d) 2