

Answer. (c) 1 g H₂

5. A sample of NH₃ molecule irrespective of source contains 82.35% Nitrogen and 17.65% of Hydrogen by mass. This data supports:

- (a) Law of Conservation of Mass (b) Law of Multiple Proportions
(c) Law of Definite Proportions (d) Avogadro's Law

Answer. (c) Law of Definite Proportions

6. An element X is divalent and another element Y is tetravalent. The compound formed by these two elements will be:

- (a) XY
(b) XY₂
(c) X₂Y
(d) XY₄

Answer. (b) XY₂

7. The molecular formula of potassium nitrate is _____.

- (a) KNO₃
(b) KNO
(c) KNO₂
(d) KON

Answer. (a) KNO₃

8. 3.42 g of sucrose are dissolved in 18 g of water in a beaker. The numbers of oxygen atoms in the solution are:

- (a) 6.68×10^{23}
(b) 6.09×10^{22}
(c) 6.022×10^{23}
(d) 6.022×10^{22}

Answer. (a) 6.68×10^{23}

9. Molecular mass is defined as the:

- (a) Mass of one molecule of any substance compared with the mass of one atom of C – 12
(b) Mass of one atom compared with the mass of one atom of hydrogen
(c) Mass of one atom compared with the mass of one molecule
(d) None of the above

Answer. (a) Mass of one molecule of any substance compared with the mass of one atom of C – 12

10. A change in the physical state can be brought about

- (a) only when energy is given to the system
(b) only when energy is taken out from the system
(c) When energy is either given to, or taken out from the system
(d) Without any energy change

Answer. (c) When energy is either given to, or taken out from the system

11. The atomic mass of sodium is 23. The number of moles in 46g of sodium is _____.

- (a) 4
(b) 2