

## Stoichiometry 1

[Mole Concept, Stoichiometry, Concentration terms, Atomic wt & Molecular weight]

- Q 1. Mass of atoms & molecules are not measured in g because  
 (A) They have very high mass  
 (B) They have very low mass  
 (C) Their mass can not be measured  
 (D) g is not S.I. unit of mass
- Q 2. 1 amu is equal to  
 (A)  $\frac{1}{14}(O^{16})$  (B)  $\frac{1}{12}(C^{12})$   
 (C) 1 g of  $H_2$  (D)  $1.66 \times 10^{-23} Kg$
- Q 3. The modern atomic mass scale is based on  
 (A)  $O^{16}$  (B)  $C^{12}$   
 (C)  $H^1$  (D)  $C^{13}$
- Q 4. 10 g in 'amu' is equal to  
 (A)  $6.022 \times 10^{22} amu$   
 (B)  $6.022 \times 10^{24} amu$   
 (C)  $6.022 \times 10^{23} amu$   
 (D) None of these
- Q 5. Avogadro's number value  
 (A) is always equal to  $6.022 \times 10^{23}$   
 (B) depends on definition of 1 amu  
 (C) depends on definition of 1 mole  
 (D) Both B & C
- Q 6. If the atomic weight of carbon were set at 100 amu, what would be the value of avogadro's no. [Given: mass of 1 mole of C-12 atoms 12 g]  
 (A)  $0.12 \times 6.022 \times 10^{23}$   
 (B)  $8.33 \times 6.022 \times 10^{23}$   
 (C)  $6.022 \times 10^{23}$   
 (D)  $6.022 \times 10^{25}$
- Q 7. If a mole were assume to contain  $1 \times 10^{24}$  particles, what would be the mass of a single  
 (A)  $32 \times 10^{-24} amu$  (B) 32 g  
 (C) 32 amu (D)  $\frac{32 \times 6.022}{10} amu$
- Q 8. If the atomic mass of oxygen were taken to be 100, the molecular mass of water would be [IIT JEE 2006]  
 (A) 6.25 (B) 112.5  
 (C) 102 (D) 106.25
- Q 9. How many years it would take to spend avogadro's number of rupees at the rate of 10 lac rupees per second.  
 (A)  $1.9 \times 10^{20} years$  (B)  $1.9 \times 10^{10} years$   
 (C)  $1.9 \times 10^{15} years$  (D)  $1.9 \times 10^{12} years$
- Q 10. No of electrons in 5 mole of electrons ( $N_A =$  Avogadro's number)  
 (A)  $5 N_A$  (B)  $5/N_A$   
 (C)  $N_A/5$  (D) None of these
- Q 11. In  $10^{24}$  molecules of  $Na_2CO_3$ , the mole of  $Na_2CO_3$  is equal to  
 (A)  $\frac{100}{6.022}$  (B)  $\frac{10}{6.022}$   
 (C)  $\frac{6.022}{10}$  (D)  $6.022 \times 10$
- Q 12. 1 mole of  $P_4$  molecule contains  
 (A) 1 molecule (B) 4 molecule  
 (C)  $0.25 N_A$  atoms (D)  $4 N_A$  Atoms
- Q 13. The number of Na atoms in 2 mole of  $Na_4[Fe(CN)_6]$  is [AIIMS 2013]  
 (A) 2 (B)  $6.022 \times 10^{23}$   
 (C)  $8 \times 6.022 \times 10^{23}$  (D)  $4 \times 6.022 \times 10^{23}$
- Q 14. 1.5 mole of oxygen atom is present in  
 (A) 0.5 mole  $BaCO_3$  (B) 1 mole  $BaCO_3$   
 (C) 2 mole  $BaCO_3$  (D) 0.25 mole  $BaCO_3$
- Q 15. 5 mole of  $Na_2SO_4$  contains  
 (A) 20 Mole O-atom (B) 10 Mole O-atom  
 (C) 15 Mole O-atom (D) 4 Mole O-atom

## Answer Key

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|---------|---------|---------|
| (1). B  | (2). B  | (3). B  |
| (4). B  | (5). D  | (6). A  |
| (7). D  | (8). B  | (9). B  |
| (10). A | (11). B | (12). D |
| (13). C | (14). A | (15). A |

