Yakeen NEET 2.0 2026

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Some Basic Concept of Chemistry

DPP: 4

Q1 Equal masses of oxygen, hydrogen and methane are taken in identical conditions. What is the ratio of the volumes of the gases under identical conditions?
(A) $16:1:8$ (B) $1:16:2$
(C) $1:16:8$ (D) $2:16:1$

Q2 $11.2\ \mathrm{L}$ of $\mathrm{O_3(g)}$ contains how many numbers of molecules?
(A) $\mathrm{N_A}$ molecules
(B) $\mathrm{N_A}/2$ molecules
(C) $2\ \mathrm{N_A}$ molecules
(D) $3\ \mathrm{N_A}$ molecules

Q3 The number of molecules in 89.6 liters of a gas at NTP are
(A) 6.02×10^{23}
(B) $2 \times 6.02 \times 10^{23}$
(C) $3 \times 6.02 \times 10^{23}$
(D) $4 \times 6.02 \times 10^{23}$

Q4 The number of moles of sodium oxide in $620\ \mathrm{g}$ of it is
(A) $1\ \mathrm{mol}$
(B) 10 moles
(C) 18 moles
(D) 100 moles

Q5 The number of mol of N-atom in 18.066×10^{23} nitrogen atoms is
(A) $1\ \mathrm{mol}$
(B) $2\ \mathrm{mol}$
(C) $3\ \mathrm{mol}$
(D) $4\ \mathrm{mol}$

Q6 One mole electron means:
(A) $\mathrm{N_A}$ electrons
(B) 6.023×10^{23} electrons
(C) $0.55\mathrm{mg}$ electrons
(D) All of these

Q7 The number of moles of sodium oxide in $620\ \mathrm{g}$ of its is
(A) $1\ \mathrm{mol}$
(B) 10 moles
(C) 18 moles
(D) 100 moles

Q8 $1\ \mathrm{mol}$ of $\mathrm{CH_4}$ contains
(A) 6.02×10^{23} atoms of H
(B) $4\ \mathrm{g}$ atom of Hydrogen
(C) 1.81×10^{23} molecules of $\mathrm{CH_4}$
(D) $3.0\ \mathrm{g}$ of carbon

Q9 If we consider that $1/6$, in place of $1/12$, mass of carbon atom is taken to be the relative atomic mass unit, the mass of one mole of the substance will :-
(A) be a function of the molecular mass of the substance
(B) remain unchanged
(C) increase two fold
(D) decrease twice

Q10 If Avogadro number $\mathrm{N_A}$, is changed from $6.022 \times 10^{23}\ \mathrm{mol^{-1}}$ to $6.022 \times 10^{20}\ \mathrm{mol^{-1}}$, this would change:
(A) The ratio of elements to each other in a compound
(B) The definition of mass in units of grams
(C) The mass of one mole of carbon
(D) The ratio of chemical species to each other in a balanced equation

Q11 Statement-I: Weight of 1 molecule of $\mathrm{O_2} = 32u$
Statement-II: $1\ \mathrm{g}$ molecule $= 6.023 \times 10^{23}$ molecules.
(A) Both Statement-I and Statement-II are correct.
(B) Both Statement-I and Statement-II are incorrect.
(C) Statement-I is correct and Statement-II is incorrect.
(D) Statement-I is incorrect and Statement-II is correct.

Answer Key

Q1	(B)
Q2	(B)
Q3	(D)
Q4	(B)
Q5	(C)
Q6	(D)
Q7	(B)
Q8	(B)
Q9	(D)
Q10	(C)
Q11	(A)