

Chemistry Assignment -I

Class -XI science

24 April 2023

Chapter -I

1. Mass of the one atom of the element X is 1.66×10^{-26} g. Number of atoms in 1g of the element is:

a)

1.66×10^{-26}

NO

b) 1.66×10^{25} c) $1.66 \times 10^{-26} \times N_0$ d) 6.024×10^{25}

2. The number of molecules in 16g of methane is

a) $0.1N_A$ b) N_A c) $2N_A$ d) $0.2N_A$

3. The mass of 112cm³ of O₂ gas at STP is

a) 0.16g b) 0.8g c) 0.08g d) 1.6g

4. The flask A, B of equal size contain 2g of H₂ and 2g of N₂

respectively at the same temperature. The number of molecules in flask A is:

a) Same as those in flask B

b) Less than those in flask B

c) Greater than those in flask B

d) exactly double than those in flask B

5. Which of the following has the largest number of atoms?

a) 0.5g atom of Cu b) 0.635g of Cu

c) 0.25moles of Cu atom d) 1g of Cu

6. One litre of a gas is at a pressure of 10^{-6} mm of Hg at 25°C. How many molecules are present in the vessel?

a) 3.2×10^6 b) 3.2×10^{13} c) 3.2×10^{10} d) 3×10^4

7. The containers P and Q of equal volume (1litre each) contain 6g of O₂ and SO₂ respectively at 300K and 1atmosphere. Then.

a) No. of molecules in P is less than that in Q

b) No. of the molecules in Q is less than that in P

c) No. of molecules in P and Q are same

d) either (a) or (b)

8. Number of moles in 1m

3 gas at NTP is

a) 4.46 b) 44.6 c) 446 d) 4460

9. 80g of oxygen contains as many atoms as in

a) 10g of hydrogen b) 5g of hydrogen

c) 80g of hydrogen d) 1g hydrogen

10. The number of molecules in 18mg of water in terms of Avogadro number N is

a) $10^{-3}N$ b) $10^{-2}N$ c) $10^{-1}N$ d) $10N$

11. How many times an atom of sulphur is heavier than atom of carbon?

a) 32times b) 12times c) $8/3$ times d) $12/32$ times

12. The law of multiple proportions is illustrated by

a) Carbon monoxide and carbon dioxide

b) potassium bromide and potassium chloride

c) Water and heavy water

d) calcium hydroxide and barium hydroxide

13. Hydrogen and oxygen combine to form H_2O_2 and H_2O containing 5.93%

and 11.2% hydrogen respectively. The data illustrates

a) Law of conservation of mass b) Law of constant proportions

c) Law of reciprocal proportions d) Law of multiple proportions

14. Oxygen combines with two isotopes of carbon ^{12}C . And ^{14}C to form two

samples of carbon dioxide the data illustrates

a) Law of conservation of mass b) Law of multiple proportions

c) Law of reciprocal proportions d) none of these

15. Write the significant figures for the following:

a) 1.02 b) 30.9 c) 231.9 d) 0.540

e) 0.096 f) 0.070 g) 1.0 h) 6.023

i) 6.023×10^{23} j) 1.0×10^3

16. The answer to the following problem in standard exponential form is:

$$(2.0 \times 10^{13}) + (1.5 \times 10^{14})$$

a) 3.5×10^{13} b) 3.5×10^{14} c) 2.15×10^{13} d) 1.7×10^{14}

17. $24.8 \div 12.4 = ?$ The correct answer to this problem in proper number of significant digit is

a) 2 b) 2.0 c) 2.00 d) 2.000

18. $152.06 \times 0.24 = 36.499$. The correct answer to this problem in proper number of significant digits is

a) 36.4944 b) 36.494 c) 37 d) 36

19. $1280 \div 2.0 = ?$ The correct answer to this problem in proper number of significant digits is

a) 64 b) 6.40×10^2 c) 640.0 d) 640

20. Which one of the following statements is incorrect?

a) All elements are homogeneous

b) Compounds made up of a number of elements are heterogeneous

c) A mixture is not always heterogeneous

d) Air is heterogeneous mixture