



# MACRO VISION ACADEMY, BURHANPUR

SUMMER ASSIGNMENT 2018-19  
CHEMISTRY

CLASS IX

- Which one of the phrases would be incorrect to use?  
(a) a mole of an element (b) a mole of a compound  
(c) an atom of an element (d) an atom of compound.
- The law of multiple proportions is illustrated by the pair of compounds  
(a) sodium chloride and sodium bromide  
(b) water and heavy water  
(c) sulphur dioxide and sulphur trioxide  
(d) magnesium hydroxide and magnesium oxide.
- Which of the following has smallest mass ?  
(a) 4 g of He (b)  $6.022 \times 10$  atoms of He  
(c) 1 atom of He (d) 1 mole atoms of He.
- Which of the following is a triatomic molecule?  
(a) carbon dioxide (b) ammonia  
(c) helium (d) sugar.
- Which of the following is the correct symbol of an element ?  
(a) SN (b) CO (c) Cu (d) PB.
- All samples of carbon dioxide contain carbon and oxygen in the mass ratio 3 : 8. This is in agreement with the law of  
(a) conservation of mass (b) constant proportions  
(c) multiple proportions (d) gaseous volumes.
- The indivisibility of an atom was proposed by  
(a) Rutherford (b) Dalton  
(c) Bohr (d) Einstein.
- Which of the following is a tetratomic molecule?  
(a)  $O_2$  (b)  $O_3$   
(c)  $NO_2$  (d)  $SO_3$ .
- The number of atoms present in a molecule of a substance is called  
(a) molecularity (b) atomicity  
(c) valency (d) reactivity.
- The valency of nitrogen in ammonia ( $NH_3$ ) is  
(a) 2 (b) 0 (c) 3 (d) 4.
- A sample of pure water, irrespective of its source contains 11.1% hydrogen and 88.9% oxygen. The data supports  
(a) law of constant proportions (b) law of conservation of mass  
(c) law of reciprocal proportions (d) law of multiple proportions.
- In compound A, 1.00g nitrogen combines with 0.57 g oxygen. In compound B, 2.00 g nitrogen combines with 2.24 g oxygen. In compound C, 3.00 g nitrogen combines with 5.11 g oxygen. These results obey the following law  
(a) law of constant proportion (b) law of multiple proportion  
(c) law of reciprocal proportion (d) law of partial pressure.

13. Which of the following molecule number of particles?  
 (a) 8 g of  $\text{CH}_4$  (b) 4.4 g of  $\text{CO}_2$   
 (c) 34.2 g of  $\text{C}_{23}\text{H}_{22}\text{O}_{11}$  (d) 2 g of  $\text{H}_2$ .
14. Molecular mass is defined as the  
 (a) mass of one atom compared with the mass of one molecule  
 (b) mass of one atom compared with the mass of one atom of hydrogen  
 (c) mass of one molecule of any substance compared with the mass of one atom of C-12  
 (d) none of the above.
15. Which of the following elements has a symbol with two letters ?  
 (a) Aluminium (b) Copper (c) Sodium (d) All of the above
16. The molecular formula  $\text{P}_2\text{O}_5$  means that  
 (a) a molecule contains 2 atoms of P and 5 atoms of O  
 (b) the ratio of the mass of P to the mass of O in the molecule is 2.5  
 (c) there are twice as many P atoms in the molecule as there are O atoms  
 (d) the ratio of the mass of P to the mass of O in the molecule is 5 : 2.
17. The formula of chloride of a metal M is  $\text{MCl}_3$ , then the formula of the phosphate of metal M will be  
 (a)  $\text{MPO}_4$  (b)  $\text{M}_2\text{PO}_4$   
 (c)  $\text{M}_3\text{PO}_4$  (d)  $\text{M}_2(\text{PO}_4)_3$ .
18. An atom is the  
 (a) smallest particle of matter known (b) smallest particle of a gas  
 (c) smallest particle of an element that can take part in a chemical change  
 (d) radioactive emission.
19. One mole of a gas occupies a volume of 22.4 L.  
 This is derived from  
 (a) Berzelius' hypothesis (b) Gay-Lussac's law  
 (c) Avogadro's law (d) Dalton's law.
20. Which of the following represents a polyatomic ion?  
 (a) Sulphide (b) Chloride  
 (c) Sulphate (d) Nitride
21. The atomic number of sodium is 11 and its mass number is 23. It has  
 I. 11 neutrons and 12 protons II. 12 protons and 11 electrons  
 III. 11 electrons and 12 neutrons IV. 12 electrons and 11 neutrons
22.  $\text{H}_2$  represents  
 (a) 1 mole of hydrogen atoms (b) 1 g of hydrogen  
 (c) both (a) and (b) (d) none of these.
23. The amount of a substance is measured in  
 (a) mole (b) kilogram (c) seconds (d) gram.
24. Valency of silver in  $\text{Ag}_2\text{S}$  is  
 (a) 1 (b) 2 (c) 0 (d) 3
25. Latin name for gold is  
 (a) argentum (b) Natrium  
 (c) kalium (d) Aurum

26. Atomicity of sulphur is  
 (a) 8 (b) 4 (c) 2 (d) 1
27. molecules of nitrogen are represented by \_\_\_\_\_.  
 (a) N (b)  $2N_2$  (c)  $N_2$  (d)  $2N$
28. A chemical equation is always balanced to fulfil the condition of  
 (a) Dalton's atomic theory (b) Law of constant composition  
 (c) Law of multiple proportions (d) Law of conservation of mass.
29. In carbon disulphide ( $CS_2$ ), the mass of sulphur in combination with 3.0 g of carbon is  
 (a) 4.0 g (b) 6.0 g  
 (c) 64.0 g (d) 16.0 g.
30. The molecular formula of potassium nitrate is \_\_\_\_\_.  
 (a) KNO (b)  $KNO_3$  (c)  $KNO_2$  (d) KON
31. Which is not correct according to Dalton's atomic theory?  
 (a) Atoms are indivisible.  
 (b) Atoms combine in simple whole number ratios.  
 (c) All atoms of an element may not have same mass.  
 (d) Atoms of different elements have different masses.
32. Chemical formula of ferric oxide is  
 (a) FeO (b)  $Fe_2O_3$   
 (c)  $Fe_3O_4$  (d) None of these.
33. Mass of 1 mole of nitrogen atoms is  
 (a) 28 g (b) 14.0 g  
 (c) 28 amu (d) 14 amu.
34. Kalium is the Latin name of \_\_\_\_\_.  
 (a) Potassium (b) Krypton (c) Calcium (d) Phosphorus
35. Which of the following represents 1 amu?  
 (a) Mass of C-12 atom (b) Mass of O-16 atom  
 (c) 1/12th of mass of C-12 atom (d) Mass of hydrogen molecule.
36. In which of the following the valency of each of the constituent elements is equal to the total number of atoms in one molecule of the compound?  
 (a) HCl (b)  $H_2S$   
 (c) CaO (d)  $MgCl_2$ .
37. Which one of the following statements is true?  
 (a) Mass of 0.5 mole of N atoms  
 (b) Mass of 0.5 mole of  $N_2$  gas  
 (c) Mass of 0.5 mole of  $N_2$  gas  
 (d) Mass of 0.5 mole of  $O_2$  gas.
38. 'Ion' is a three-letter word. It means  
 (a) a mixture of iodine, oxygen and nitrogen  
 (b) an alloy of iron (c) a charged particle  
 (d) a form of light.

39. Number of moles of water present in 180 g of water will be  
(a) 5 (b) 10  
(c) 15 (d) 18
40. The  $(1/12)^{\text{th}}$  mass of a carbon atom is called  
(a) mass number (b) atomic mass  
(c) atomic mass unit (d) relative atomic mass.
41. "All matter is made up of very small particles which cannot be further broken down. These particles are called atoms". This statement is one of the assumptions of  
(a) Rutherford's nuclear theory (b) Bohr's theory  
(c) Dalton's atomic theory (d) Kinetic theory of gases.
42. Two gaseous samples were analysed. One contained 1.2 g of carbon and 3.2 g of oxygen. The other contained 27.3% carbon and 72.7% oxygen. The experimental data are in accordance with  
(a) law of conservation of mass (b) law of definite proportions  
(c) law of reciprocal proportions (d) law of multiple proportions.
43. 20.8 g of  $\text{BaCl}_2$  on reaction with 9.8 g of  $\text{H}_2\text{SO}_4$  produces 7.3 g of  $\text{HCl}$  and some amount of  $\text{BaSO}_4$ . The amount of  $\text{BaSO}_4$  formed is  
(a) 23.3 g (b) 20.8 g  
(c) 9.8 g (d) 10.4 g.
44. How many grams of  $\text{H}_2\text{SO}_4$  are present in 0.25 mole of  $\text{H}_2\text{SO}_4$ ?  
(a) 2.45 (b) 24.5  
(c) 0.245 (d) 0.25.
45. 52 u of He contains  
(a)  $4 \times 6.022 \times 10^{23}$  atoms (b) 13 atoms  
(c)  $13 \times 6.022 \times 10^{23}$  atoms (d) 4 atoms.
46. Number of atoms in 4.25 g of  $\text{NH}_3$  is nearly  
(a)  $1 \times 10^{23}$  (b)  $1.5 \times 10^{23}$   
(c)  $2 \times 10^{23}$  (d)  $6 \times 10^{23}$ .
47. The quantity of matter present in an object is called its \_\_\_\_\_.  
(a) Mass (b) Volume (c) Density (d) Vapour Pressure
48. Dalton's atomic theory contained  
(a) Boyle's law (b) Charle's law  
(c) Mass conservation law (d) Both (a) and (b).
49. A particle which maintains its chemical identity even after physical and chemical changes is  
(a) atom (b) molecule  
(c) compound (d) none of these.
50. Symbol of an element consists of one or two letters derived from name of element  
(a) Common (b) Latin  
(c) Greek (d) Any of the three.

51. The atomic symbols for mercury and potassium are respectively  
 (a) Mr and P (b) K and H  
 (c) Hg and P (d) Hg and K.
52. Molecules of phosphorus and ammonia are respectively  
 (a) monoatomic and triatomic (b) monoatomic and diatomic  
 (c) tetra-atomic and triatomic (d) tetra-atomic and tetra-atomic.
53. A cation is  
 (a) negatively charged ion (b) neutral atom  
 (c) positively charged ion (d) group of atoms.
54. Formula of calcium phosphate is  
 (a)  $\text{Ca}_2\text{PO}_4$  (b)  $\text{Ca}_2(\text{PO}_4)_3$   
 (c)  $\text{Ca}_3(\text{PO}_4)_2$  (d)  $\text{CaPO}_4$ .
55. Number of gram molecules in 63 g  $\text{HNO}_3$  is  
 (a) 1 (b) 2 (c) 3 (d) 4
56. The symbol 'u' means  
 (a) atomic mass unit (b) unified mass  
 (c) atomic mass (d) Relative mass
57. The smallest particle of a substance that is capable of independent existence is \_\_\_\_\_.  
 (a) Atom (b) Molecule (c) Electron (d) Proton
58. The correct formula of aluminium sulphate is  
 (a)  $\text{AlSO}_4$  (b)  $\text{Al}_2\text{SO}_4$   
 (c)  $\text{Al}_3(\text{SO}_4)_2$  (d)  $\text{Al}_2(\text{SO}_4)_3$
59. The mass of one C atom is  
 (a)  $6.023 \times 10^{23}$  g (b)  $1.99 \times 10^{23}$  g  
 (c) 2.00 g (d) 12 g.
60. The chemical symbol for barium is  
 (a) B (b) Ba (c) Be (d) Bi
61. The number of atoms in a molecule of the substance is called \_\_\_\_\_.  
 (a) Atomic Number (b) Avogadro Number  
 (c) Atomic Mass (d) Atomicity
62. How many atoms in total are present in  $\text{CoCl}_3 \cdot 6\text{H}_2\text{O}$ ?  
 (a) 17 (b) 22  
 (c) 8 (d) 18.
63. The mass in grams of 5 moles of Fe is  
 (a) 280 (b) 260 (c) 320 (d) 180.
64. How many grams of O is present in 50 g of  $\text{CaCO}_3$ ?  
 (a) 50 g (b) 150 g (c) 48 g (d) 24 g.
65. What is the mass of 0.5 moles of methane ( $\text{CH}_4$ )?  
 (a) 16g (b) 8g (c) 80 g (d) 0.8 g.
66. How many moles are present in 11.5 g of sodium?  
 (a) 0.05 mole (b) 5.0 mole (c) 1.5 mole (d) 0.5 mole.

67. The percentage of copper and oxygen in samples of CuO obtained by different methods were found to be the same. This illustrates the law of  
 ( a ) constant proportions ( b ) conservation of mass  
 ( c ) multiple proportions ( d ) reciprocal proportions
68. The atomic symbols for mercury, antimony and tungsten are respectively  
 ( a ) Mr, At, Tn ( b ) Hg, Sb, W  
 ( c ) Hg, At, Tn ( d ) Hg, Sb, Wo
69. Silica is a  
 ( a ) monoatomic element ( b ) diatomic element  
 ( c ) triatomic compound ( d ) tetra-atomic compound.
70. How many atoms of phosphorus are present in phosphine?  
 ( a ) 4 ( b ) 2 ( c ) 1 ( d ) 3.
71. The atomicity of  $K_2Cr_2O_7$  is  
 I. 9 II. 11 III. 10 IV. 12
72. The symbol of cadmium is  
 I. Ca II. Cu III. Cm IV. Cd
73. All noble gas molecules are  
 I. Monoatomic II. Diatomic  
 III. Triatomic IV. Both I and II
74. What is the number of valence electrons of Al?  
 a)1 b)2 c)3 d)4
75. The formula of ethanol is  $C_2H_5 - OH$ . What will be its molecular mass?  
 I. 46 u II. 34 u III. 34 g IV. 46 g
76. The molecular mass of x is 106. x can be  
 I.  $CaCO_3$  II.  $SO_3$  III.  $Na_2CO_3$  IV. NaCl
77. The ratio of H:O by mass in hydrogen peroxide ( $H_2O_2$ ) is  
 ( a ) 16 : 1 ( b ) 1 : 8 ( c ) 1 : 32 ( d ) 1 : 16
78. The molecular formula of zinc phosphate is  
 ( a )  $Zn(PO_4)_3$  ( b )  $Zn_2PO_4$  ( c )  $Zn_3(PO_4)_2$  ( d )  $ZnPO_4$
79. An element A is tetravalent and element B is divalent. The formula of the compound formed by these two elements is  
 ( a )  $AB_2$  ( b )  $A_2B$  ( c )  $A_2B_4$  ( d ) AB
80. Chloride ion has number of protons  
 ( a ) 17 ( b ) 18 ( c ) 24 ( d ) 34
81. To determine mass of other compound by comparing it with mass of carbon-12 atoms is  
 ( a ) Relative molecular mass ( b ) relative atomic mass  
 ( c ) relative molecular radius ( d ) relative atomic radius
82. Sum of protons ( $p^+$ ) and neutrons ( $n^0$ ) in an atom is called its  
 ( a ) atomic number ( b ) nucleon number  
 ( c ) Avogadro's number ( d ) protonic identity

83. Chemical symbol represents  
(a) chemical formula (b) molecular formula  
(c) structural formula (d) atomic formula
84. A modern model of an atom shows that electrons are present outside nucleus in region of high  
(a) probability (b) velocity (c) speed (d) energy level
85. The total number of atoms represented by the compound  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  is:  
a)27 b)21 c)5 d)8
86. The chemical symbol P stands for:  
a)Phosphorus b)Potassium  
c)Polonium d)Promethium
87. A group of atoms chemically bonded together is a (an):  
a)Molecule b)ion c)Salt d)Element
88. Adding electrons to an atom will result in a (an):  
a)Molecule b)Anion c)Cation d)Salt
89. When an atom loses electrons, it is called a (an) \_\_\_\_\_ and has a \_\_\_\_\_ charge.  
a)Anion, positive b)Cation, positive  
c)Anion, negative d)Cation, negative
90. An example of a triatomic molecule is \_\_\_\_\_.  
a) Ozone b) Nitrogen c) Carbon monoxide d) Hydrogen

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**ALL THE BEST**