

Name of Student	Class	Subject	Board	Chapter
	9 th	Chemistry	FB	01
Date :	Objective			Teacher Remarks

Section - A

Q. No.1:- Circle the correct option. Each part carries one mark.

01	How many numbers of moles are equivalent to 8grams of CO ₂ ?						
A	0.15	b	0.18	c	0.21	d	0.24
02	What is the formula mass of CuSO ₄ .5H ₂ O. (atomic masses: Cu=63.5, S=32, O= 16, H= 1)						
A	159.5	b	185.5	c	249.5	d	149.5
03	A compound with chemical formula Na2CX3 has formula mass 106amu. Atomic mass of the element X is:						
A	106	b	23	c	12	d	16
04	How many moles of molecules are there in 16 g oxygen:						
A	1	b	0.5	c	0.1	d	0.05
05	What is the mass of 4 moles of hydrogen gas?						
A	8.064 g	b	4.032 g	c	1 g	d	1.008 g
06	What is the mass of carbon present in 44 g of carbon dioxide?						
A	12 g	b	6 g	c	24 g	d	44 g
07	The electron configuration of an element is 1s ² 2s ² . An atom of this element will form an ion that will have charge:						
A	+1	b	+2	c	+3	d	-1
08	Which term is the same for one mole of oxygen and one mole of water:						
A	Volume	b	Mass	c	Atoms	d	Molecules
09	If one mole of carbon contains x atoms, what is the number of atoms contained in 12 g of Mg.						
A	X	b	0.5x	c	2x	d	1.5x
10	Relationship between the empirical and Molecular formula:						
A	Molecular formula= 2n × Empirical formula	b	Molecular formula = n ² × empirical formula	c	Molecular formula = n × empirical formula	d	Molecular formula = 2n ² × empirical formula
11	Which of the following lists contains only elements:						
A	Air, water, oxygen	b	Hydrogen, oxygen, brass	c	Air, water, fire, earth	d	Calcium, sulphur, carbon
12	What is the mass of carbon present in 44 g of carbon dioxide?						
A	12 g	b	6 g	c	24 g	d	44 g

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Section - B

Q. No.1:- Attempt any eleven parts. The answer of each part should not exceed 3 to 4 lines. (11×3=33).

01	Differentiate between an ion and a free radical?	02	Calculate the total number of atoms present in 18 g H ₂ O.
03	Differentiate between analytical chemistry and environmental chemistry.	04	What do you know about corpuscular nature of matter?
05	What is the number of molecules in 9.0 g of steam?	06	Differentiate between empirical formula and molecular formula.
07	Why one mole of hydrogen molecules and one mole of H-atoms have different masses?	08	What mass of sodium metal contains the same number of atoms as 12.00 g of carbon?
09	What mass of oxygen contains the same number of molecules as 42 g of nitrogen?	10	Calculate the mass of one hydrogen atom in grams.
11	Calculate the number of H-atoms present in 18 g H ₂ O.	12	Define mole.
13	Describe how Avogadro's number is related to a mole of any substance.	14	When natural gas burns, CO ₂ is formed. If 0.25 moles of CO ₂ is formed, what mass of CO ₂ is produced?

Q. No.4:- Attempt any TWO questions. All questions carry equal marks: (2×10=20)

Q. No.1:- (a). Define ion, molecular ion, formula unit, free radical, atomic number, mass number, atomic mass unit.

(b). Give main postulates of Dalton's atomic theory?

Q. No2:- (a). Differentiate between compound and mixture?

(b). The term molecular formula may not be used to represent each and every compound; rather certain compounds are represented by their formula units. Why?

Q. No.3:- (a).Define Avogadro's number. How does it relate to the masses of chemical substances?

(b).What is the concept of mole? Explain it?