

Chemistry 11

Unit #3 - Elements, Compounds & Mixtures

Section #1 - The Classification Of Matter

QUIZ - ANSWER KEY

ANSWER TO QUESTION #1

ANSWER = (d) Pure Element

H₂ only contains one element - hydrogen.

ANSWER TO QUESTION #2

ANSWER = (c) Molecular Compound

CO₂ contains two elements. Since BOTH carbon and oxygen are nonmetals, this makes it a Molecular Compound.

ANSWER TO QUESTION #3

ANSWER = (b) Homogeneous Mixture.

The fluid is a mixture of two different substances. However, because it LOOKS like one substance it is homogeneous.

Therefore it is a Homogeneous Mixture.

ANSWER TO QUESTION #4

ANSWER = (b) Ionic Compound

BaO contains two elements. Barium is a metal, while oxygen is a nonmetal. Therefore BaO must be an Ionic Compound.

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ANSWER TO QUESTION #5

ANSWER: Protons and Neutrons are found in the Nucleus.

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ANSWER TO QUESTION #6

ANSWER: Electrons are found in the atom's shells.

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ANSWER TO QUESTION #7

ANSWER: +2 Charge

Column #2 metals always have two more electrons than the nearest Column #18 atoms. Therefore they will always lose two electrons in order to become more stable.

The loss of two electrons means a +2 change in charge.

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ANSWER TO QUESTION #8

ANSWER: Ionic Bond = The attraction between positive and negatively charged ions.

Covalent Bond = A pair of electrons shared between two atoms.

ANSWER TO QUESTION #9

ANSWER: Sodium has the greater atomic mass.

Atomic Mass of Sodium (Na) = 23.0 u.

Atomic Mass of Nitrogen (N) = 14.0 u.

ANSWER TO QUESTION #10

ANSWER: The Atomic Number gives us the number of Protons in an atom.
It is also, the number of Electrons in a neutral (uncharged) atom.

ANSWER TO QUESTION #11

ANSWER: Three Elements in C_6H_5Br .

C = Carbon

H = Hydrogen

Br = Bromine

ANSWER TO QUESTION #12

ANSWER: There are **five atoms** in a CH_4 molecule.

(One Carbon atom and four Hydrogen atoms)

ANSWER TO QUESTION #13

ANSWER: A Heterogeneous Mixture is an obvious mixture. By looking at it, it's clear that it contains two or more different substances.

ANSWER TO QUESTION #14

ANSWER: A Solvent is the substance in a solution that dissolves the other substances.

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ANSWER TO QUESTION #15

Gas is the phase with the fastest moving molecules.

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ANSWER TO QUESTION #16

BOTH - Solids and **Liquids** have constant volumes.
In both cases the molecules stay in touch with each other, instead of spreading out.

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ANSWER TO QUESTION #17

Gases are easily compressed.
There is usually lots of empty space between the gas molecules, so it is easy to squeeze them closer together.

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ANSWER TO QUESTION #18

Viscosity is a liquid's resistance to flow.
A highly viscous liquid, such as syrup, is more difficult to pour than a low viscosity liquid.

ANSWER TO QUESTION #19

Malleability refers to how easy it is to change the shape of a solid.

A metal that is very malleable can easily be pounded into new shapes, and/or pressed into thinner sheets.

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ANSWER TO QUESTION #20

There should be NO change to the temperature, during the phase change.

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ANSWER TO QUESTION #21

ANSWER = Fusion

This is the phase change name for solid ice turning into liquid water.