

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. Two atoms are isotopes if they have
- different atomic numbers
 - the same mass number, but different atomic numbers
 - the same number of protons and neutrons
 - the same number of electrons, but a different number of neutrons
 - the same atomic number, but a different mass number
- _____ 2. The mass listed for each element in the periodic table is
- the mass of all of the isotopes of the element combined
 - the mass of the average number of neutrons in all of the isotopes of the element
 - the average of the atomic masses of all of the isotopes of the element
 - the exact mass of the protons and neutrons in the most common isotope of the element
 - the weighted average of the atomic masses of all of the isotopes of the element
- _____ 3. The IUPAC name for NO_2 is
- nitrite
 - nitrate
 - dinitrogen oxide
 - nitrogen dioxide
 - dinitrogen dioxide
- _____ 4. The chemical formula for iodine pentafluoride liquid is
- $\text{IF}_{5(l)}$
 - $\text{I}_5\text{F}_{(l)}$
 - $\text{I}_5\text{F}_{5(l)}$
 - $\text{I}_2\text{F}_{5(l)}$
 - I_5F
- _____ 5. Which of the following statements about atoms and molecules is correct?
- Atoms contain one or more molecules.
 - Molecules are impure substances.
 - Molecules contain two or more atoms.
 - Only elements contain atoms; all compounds contain molecules.
 - Only pure substances contain atoms; mixtures contain molecules.
- _____ 6. Which of the following formulas does NOT represent a molecular compound?
- $\text{CO}_{2(g)}$
 - $\text{CoCl}_{2(s)}$
 - $\text{SO}_{2(g)}$
 - $\text{PCl}_{5(g)}$
 - $\text{HCl}_{(g)}$

Short Answer Complete Circled Questions

- Explain how quantization of energy is analogous to a ball on a flight of steps.
- How can a line spectrum be used to identify the particular element(s) present in a gas sample?
- Make an argument for placing hydrogen in the halogen family rather than the alkali metals.

10. The accepted average atomic mass for Silicon is 28.1u. The following percent abundance data was collected from a mass spectrometer. Determine the percent abundance (x) of the isotope: $^{29}_{14}\text{Si}$.

Isotope	$^{30}_{14}\text{Si}$	$^{29}_{14}\text{Si}$	$^{28}_{14}\text{Si}$
percent abundance	3.1%	x	92.2%

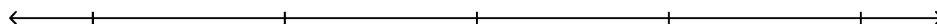
11. Use electron dot diagrams to explain the formula for Na_2O .
12. Draw a full Bohr-Rutherford diagram for the element Potassium.
13. Where given a name, write the formula and where given the formula, write the name.

1. MgO -	1. Gold (I) nitride -
2. PbO_2 -	2. Copper (II) chloride -
3. SO_3 -	3. Diphosphorus pentoxide -
4. CoCl_3 -	4. Zinc sulphate-
5. CuNO_3 -	5. Silver carbonate -
6. NH_4OH -	6. Cobalt (II) Phosphite -
7. $\text{Ca}(\text{HCO}_3)_2$ -	7. Calcium fluoride -

14. Calcium and Phosphorus react to form an ionic compound.
- What is the ionic charge on calcium? _____
 - What is the ionic charge on phosphorus? _____
 - What is the overall charge of the compound? _____
 - What is the chemical formula of the compound? _____

DRAW THIS LINE on your answer page and indicate how confident you feel in this topic and the accuracy of your quiz answers.

****After reviewing the answers & making your corrections, make a second mark on the line in your correction colour.**



Not Yet

Getting there

Got it!!