

Quiz for Video 2 – Atomic Theories

1. What do you call an atom of the same element, but with a different mass?
 - a. Ion
 - b. Isotope
 - c. Isomer
 - d. Isoplop
2. When two atoms of the same element have a different mass, what about the structure of those atoms is different?
 - a. The number of protons
 - b. The number of orbitals
 - c. The number of neutrons
 - d. The number of electrons
3. Why did the gold foil experiment not allow alpha particles to simply pass through?
 - a. The gold was too thick
 - b. Alpha particles were too large
 - c. The presence of the nucleus
 - d. Alpha particles were too slow
4. Which part of Dalton's atomic theory was most correct?
 - a. All matter consists of atoms
 - b. Atoms of one element cannot be converted into atoms of another element
 - c. All Atoms of an element are identical
 - d. Compounds result from specific chemical combinations
5. What form of matter makes up the cathode ray?
 - a. Neutrons
 - b. Electrons
 - c. Protons
 - d. Elements
6. Millikan found that the charged oil drops only travelled at specific speeds. What did this allow him to conclude?
 - a. The charge on the electron
 - b. The mass of the electron
 - c. The density of oil
 - d. The force of gravity
7. The law of multiple proportions states elements can combine in more than one ratio. Which pair of molecules shows this best?
 - a. NO and N₂
 - b. CO and CO₂
 - c. CH₄ and H₂O
 - d. H₂O₂ and NH₃
8. The atom cannot be divided into smaller parts – it is the smallest form of matter we know.
 - a. True
 - b. False
9. Electrons can be treated as virtually massless – they contribute an insignificant amount of mass compared to a proton or neutron.
 - a. True
 - b. False
10. What is the mass of a neutron?
 - a. Neutrons are massless
 - b. 1 amu
 - c. Equivalent to an electron
 - d. Is not a known value for science