

Assessment

Quiz**Section: Modern Atomic Theory**

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- _____ 1. A sodium atom, which has 11 electrons, has _____ electron(s) in its third energy level.
a. 0 b. 1 c. 2 d. 8
- _____ 2. Unlike the modern model of the atom, Bohr's model states that
a. electrons move in set paths around the nucleus of an atom.
b. atoms cannot be divided into smaller parts.
c. electrons behave like waves.
d. electrons contain orbitals.
- _____ 3. Which of the following is *not* a type of orbital?
a. *s* b. *d* c. *p* d. *x*
- _____ 4. An electron jumps to a new energy level when
a. the atom becomes charged.
b. the atom becomes unstable.
c. the electron's location is pinpointed.
d. the atom gains or loses energy.
- _____ 5. The number of energy levels filled in an atom is determined by
a. protons. b. electrons. c. neutrons. d. photons.
- _____ 6. Which of the following statements is *not* true?
a. An *s* orbital can hold two electrons.
b. A *d* orbital can hold up to two electrons.
c. An *f* orbital can hold up to three electrons.
d. A *p* orbital can hold two electrons.

In the space provided, write the letter of the term or phrase that best matches each description.

- _____ 7. found in the outer energy level of an atom
a. orbital
b. valence electron
c. photon
d. excited state
- _____ 8. where electrons are likely to be found in an atom
a. orbital
b. valence electron
c. photon
d. excited state
- _____ 9. unit or quantum of light
a. orbital
b. valence electron
c. photon
d. excited state
- _____ 10. what happens to an electron when it gains energy
a. orbital
b. valence electron
c. photon
d. excited state