

Unit 1—Atomic Structure

TRUE/FALSE

1. Since electrons are negatively charged particles and protons are positively charged particles, they repel each other.

ANS: F PTS: 1 REF: The Law of Charges

2. The hydrogen atom contains one proton and one electron.

ANS: T PTS: 1 REF: Structure of the Atom

3. The orbit in which the electron exists is determined by the electron's weight times its speed times the diameter of the orbit.

ANS: F PTS: 1 REF: Structure of the Atom

4. Electricity is composed of electrons.

ANS: T PTS: 1 REF: Valence Electrons

5. The atoms of an insulator generally contain seven or eight valence electrons.

ANS: T PTS: 1 REF: Insulators

MULTIPLE CHOICE

1. In 1808 a scientist named ____ proposed that all matter was composed of atoms.

a. J. J. Thompson c. Isaac Newton
b. Niels Bohr d. John Dalton

ANS: D PTS: 1 REF: Structure of the Atom

2. In 1913 a scientist named ____ presented the most accepted theory concerning the structure of an atom.

a. J. J. Thompson c. Isaac Newton
b. Niels Bohr d. John Dalton

ANS: B PTS: 1 REF: Structure of the Atom

3. ____ is the best natural conductor of electricity.

a. Copper c. Gold
b. Silver d. Aluminum

ANS: B PTS: 1 REF: Valence Electrons

4. ____ produce electricity by chemical action.

a. Batteries c. Thermocouples
b. Solar cells d. Piezoelectric devices

ANS: A PTS: 1 REF: Valence Electrons

5. ____ are materials that do not permit electrons to flow through them easily.

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|------------------|---------------|
| a. Alternators | c. Insulators |
| b. Thermocouples | d. Conductors |

ANS: C

PTS: 1

REF: Insulators