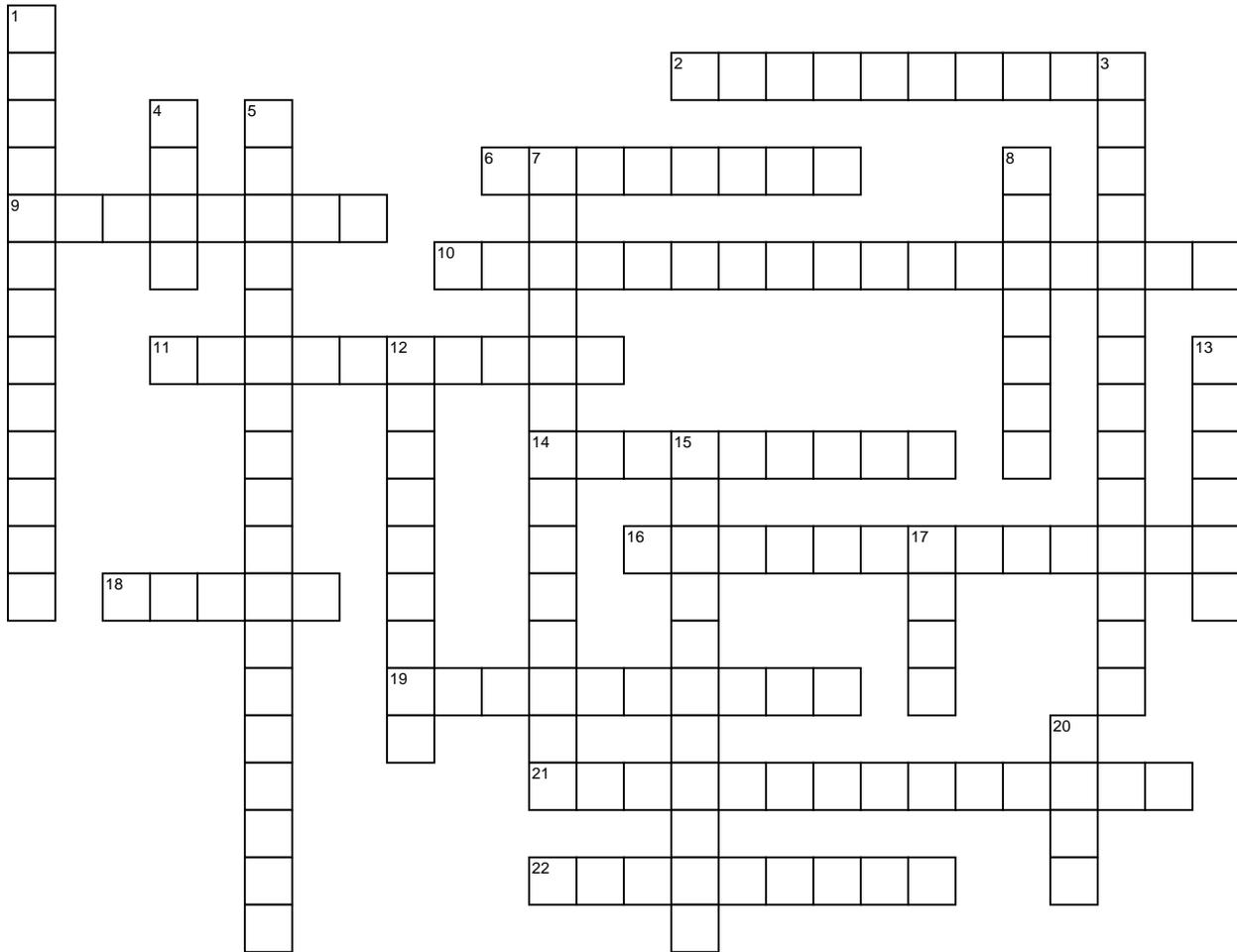


Chapter 10

HVAC Electricity and Electronics



ACROSS

- 2 _____ are materials with more than four electrons in their atom's outer orbit.
- 6 An _____ measures the resistance in ohms of a component or circuit section when no current is flowing through the circuit.
- 9 A _____ is a metal fastener attached to the end of a wire, which makes the electrical connection.
- 10 _____ are terms commonly used to describe digital meters.
- 11 _____ are materials with fewer than four electrons in their atom's outer orbit.
- 14 A wiring _____, sometimes called a diagram, shows electrical components and wiring using symbols and lines to represent components and wires.
- 16 Materials with exactly four electrons in their outer orbit are neither conductors nor insulators, but are called _____.
- 18 A _____ is a magnetic switch that uses a movable armature to control a high-amperage circuit by using a low-amperage electrical switch.
- 19 An _____ is any circuit that is not complete, or that lacks continuity, such as a broken wire.
- 21 The discovery of the electron and its negative charge led to the _____.
- 22 A _____ measures the pressure or potential of electricity in units of volts.

DOWN

- 1 A _____ is a type of short circuit that occurs when the current bypasses part of the normal circuit and flows directly to ground.
- 3 A _____ occurs when the power side of one circuit is electrically connected to the power side of another circuit.
- 4 Resistance to the flow of current through a conductor is measured in units called _____, named after the German physicist George Simon Ohm (1787-1854).
- 5 It was once thought that electricity had only one charge and moved from positive to negative.
- 7 _____ is resistance higher than normal circuit resistance.
- 8 An _____r measures the flow of current through a complete circuit in units of amperes or milliamperes (1/1,000 of an ampere).
- 12 The term _____ usually refers to the plastic portion that snaps or connects together.
- 13 The _____ is the unit used throughout the world to measure current flow.
- 15 _____ is the movement of electrons from one atom to another. The dense center of each atom is called the nucleus.
- 17 Each module, also called a _____, must communicate with other modules.
- 20 The _____ is the unit of measurement for electrical pressure.