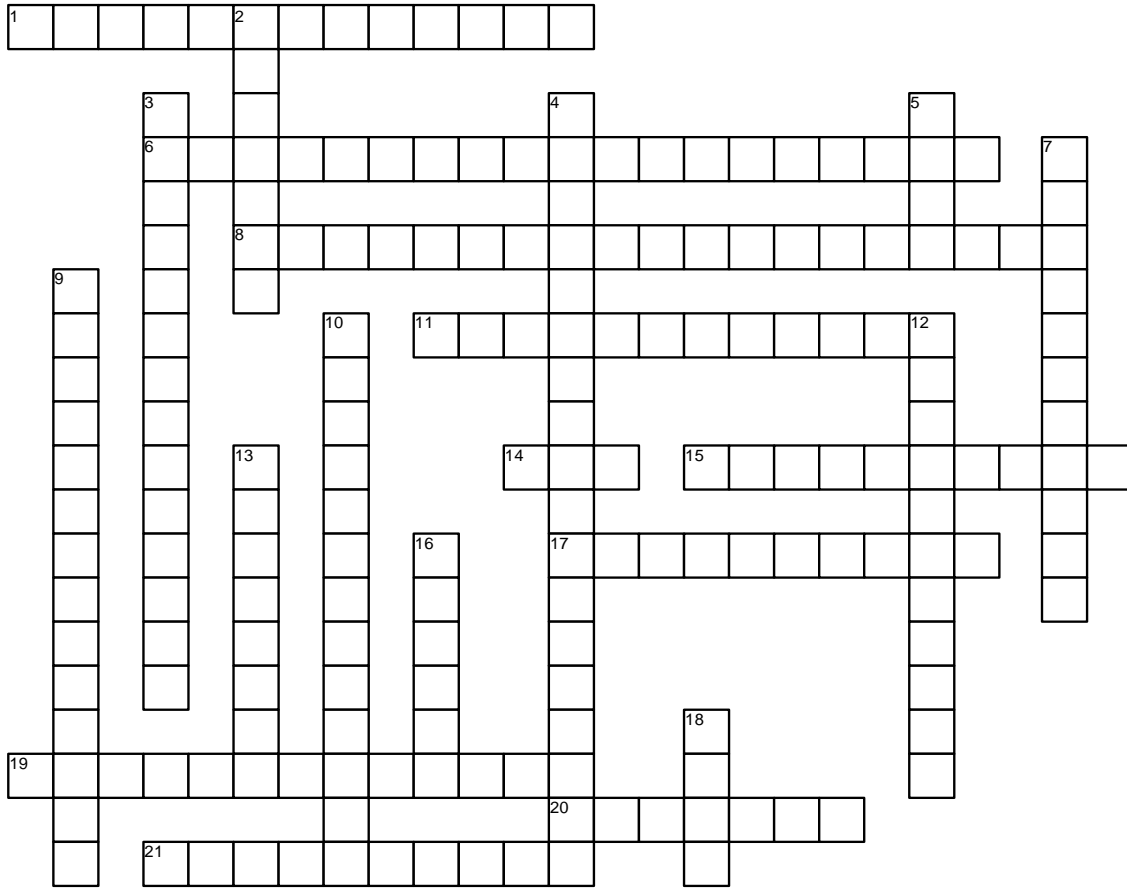


Electrical Fundamentals

Chapter 39



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ACROSS

- 1 Because the number of negative-charged electrons is balanced with the same number of positive-charged protons, an atom has a _____.
- 6 Voltage is also called _____, because if there is voltage present in a conductor, there is a possibility for current flow.
- 8 _____ is also known as voltage.
- 11 When pieces of two different metals joined together at both ends and one junction is heated, current passes

through the metals. A _____ is used to measure this very small current.

- 14 When an atom is not balanced, it becomes a charged particle called an ____.
- 15 _____ are materials with fewer than four electrons in their atom's outer orbit.
- 17 _____ are materials with more than four electrons in their atom's outer orbit.
- 19 A _____ is a three-terminal variable resistor where a wiper contact provides a variable voltage output.
- 20 A _____ is 6.28 billion billion electrons.
- 21 _____ to the flow

of current through a conductor is measured in units called ohms.

DOWN

- 2 Amperes are measured by an _____.
- 3 Materials with exactly four electrons in their outer orbit are neither conductors nor insulators, but are called _____.
- 4 _____ is another way of indicating voltage.
- 5 A _____ is the electrical unit for power.
- 7 The outermost electron shell or ring, called the _____, is the most important part of

understanding electricity.

- 9 Tightly held electrons are called _____.
- 10 Loosely held electrons are called _____.
- 12 _____ is the movement of electrons from one atom to another.
- 13 A _____ is a two-terminal variable resistor unit in which all of the current flows through a movable arm.
- 16 The _____ is the unit used throughout the world to measure current flow.
- 18 The _____ is the unit of measurement for electrical pressure.