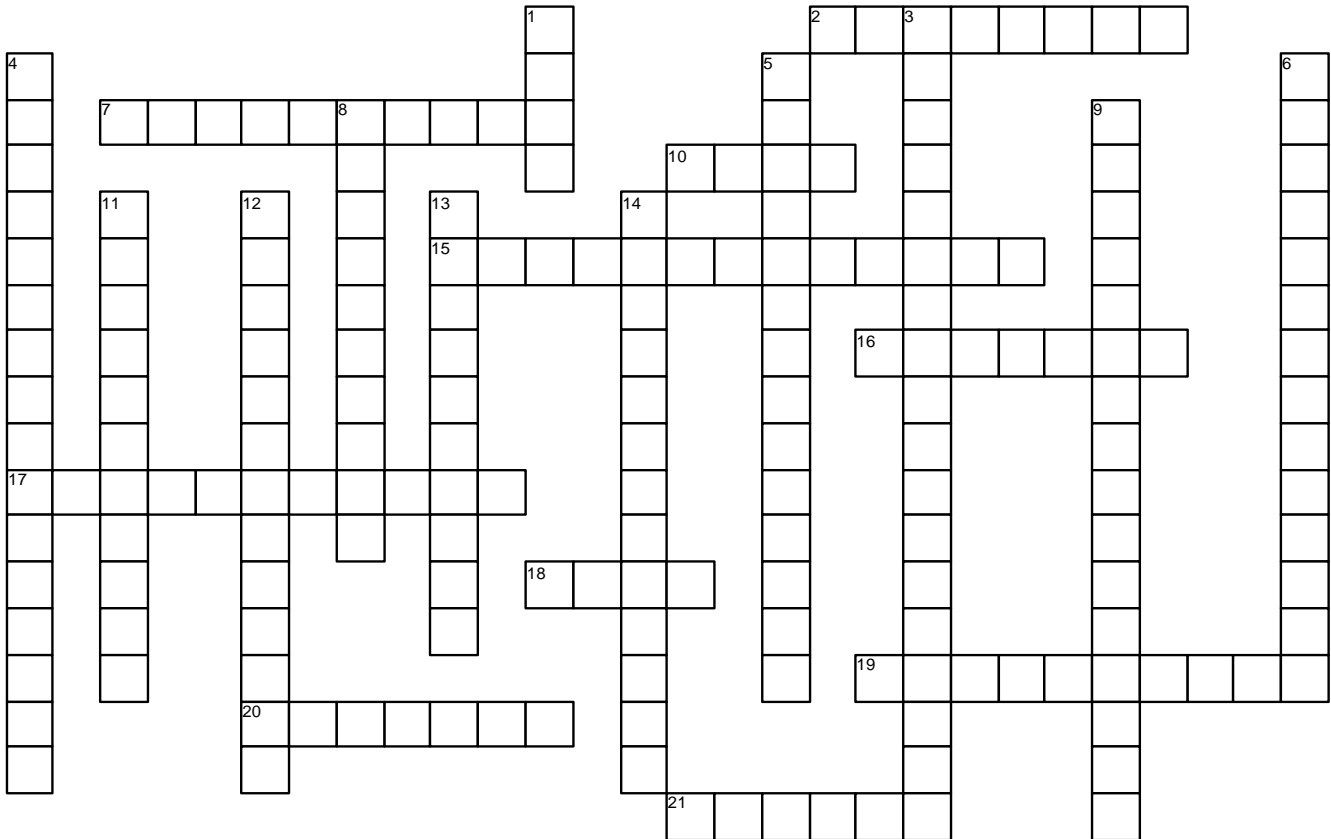


# Electrical Fundamentals

## Chapter 4



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### ACROSS

- 2 A \_\_\_\_\_ is a two-terminal (resistor) unit in which all of the current flows through a movable arm.
- 7 Voltage is also called \_\_\_\_\_ potential, because if there is voltage present in a conductor, there is a possibility for current flow.
- 10 Resistance to the flow of current through a conductor is measured in units called \_\_\_\_\_.
- 15 Because the number of negative-charged electrons is balanced with the same number of positive-charged protons, an atom has a \_\_\_\_\_.
- 16 Amperes are measured by an \_\_\_\_\_.
- 17 \_\_\_\_\_ is the movement of electrons from one atom to another.
- 18 A \_\_\_\_\_ is the electrical unit for power, the capacity to do work.
- 19 \_\_\_\_\_ are materials with fewer than four electrons in their atom's outer orbit.
- 20 A \_\_\_\_\_ is 6.28 billion billion electrons.
- 21 The \_\_\_\_\_ is the unit used throughout the world to measure current flow.

### DOWN

- 1 The \_\_\_\_\_ is the unit of measurement for electrical pressure.
- 3 \_\_\_\_\_ is another way of indicating voltage.
- 4 Two different materials (usually metals) placed in a conducting and reactive chemical solution create a difference in potential, or voltage, between them. This principle is called \_\_\_\_\_ and is the basis of the automotive battery.
- 5 Materials with exactly four electrons in their outer orbit are neither conductors nor insulators, but are called \_\_\_\_\_.
- 6 Tightly held electrons are called \_\_\_\_\_.
- 8 \_\_\_\_\_ to the flow of current through a conductor is measured in units called ohms.
- 9 The voltage produced by the applied pressure between two crystals is called \_\_\_\_\_.
- 11 The outermost electron shell or ring, called the \_\_\_\_\_, is the most important part of understanding electricity.
- 12 Electrons moving through a solid can carry heat from one side of the material to the other side. This effect is called the \_\_\_\_\_.
- 13 \_\_\_\_\_ are materials with more than four electrons in their atom's outer orbit.
- 14 Loosely held electrons are called \_\_\_\_\_.