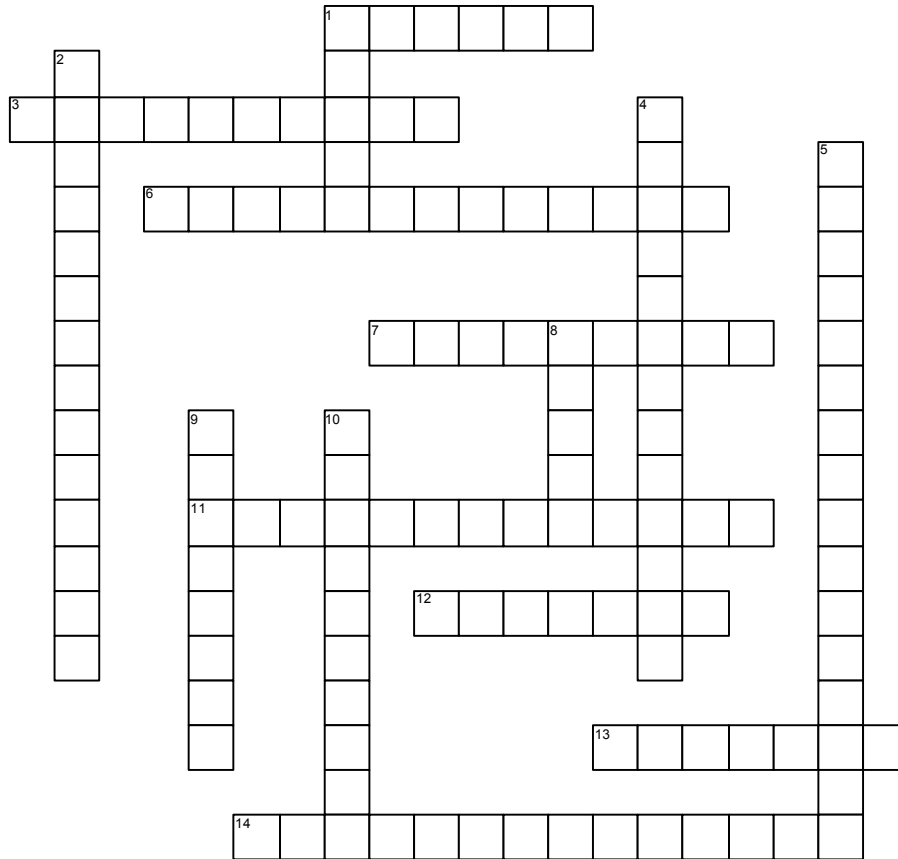


# Electronic Fundamentals

## Chapter 12



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### ACROSS

- 1 When another material is added to a semiconductor material in very small amounts, it is called \_\_\_\_\_.
- 3 A \_\_\_\_\_ is a specially constructed diode designed to operate with a reverse-bias current.
- 6 \_- \_\_\_\_\_ is produced by doping silicon or germanium with the element boron or the element indium
- 7 \_\_\_\_\_ is an example of a semiconductor.
- 11 \_- \_\_\_\_\_ is silicon or germanium that is doped with an element such as phosphorus, arsenic, or antimony, each having five electrons in its outer orbit.
- 12 The negative electrode of a diode is called the \_\_\_\_\_.
- 13 \_\_\_\_\_ is an example of a semiconductor.
- 14 Another name for a clamping diode is a \_\_\_\_\_.

### DOWN

- 1 A \_\_\_\_\_ is an electrical one-way check valve made by combining a P-type material and an N-type material.
- 2 \_\_\_\_\_ are materials that contain exactly four electrons in the outer orbit of their atom structure and are, therefore, neither good conductors nor good insulators.
- 4 A diode connected across the terminals of a coil to control voltage spikes is called a \_\_\_\_\_.
- 5 Another name for a clamping diode is a \_\_\_\_\_.
- 8 The positive electrode of a diode is called the \_\_\_\_\_.
- 9 The point where the two types of materials join in a diode is called the \_\_\_\_\_.
- 10 The doping elements are called \_\_\_\_\_; therefore, after their addition, the germanium and silicon are no longer considered pure elements.