

Nature and Electrical Engineering Basics

Electrical Engineering · Answer Key · 18 Questions

1. Which marine animal is famous for producing a high-voltage electrical discharge to stun its prey?

- A) Electric Eel**
- B) Sea Turtle
- C) Great White Shark
- D) Blue Whale

2. What is the primary function of an electrical insulator in a circuit?

- A) To conduct heat
- B) To stop the flow of electric current**
- C) To increase voltage
- D) To generate electricity

3. In electrical engineering, what is the standard unit used to measure electric current?

- A) Volt
- B) Watt
- C) Ampere**
- D) Ohm

4. Which natural phenomenon is a massive electrical discharge in the atmosphere?

- A) Rainbow
- B) Lightning**
- C) Aurora
- D) Tornado

5. What material is commonly used as a conductor in electrical wiring due to its high conductivity?

- A) Rubber
- B) Glass
- C) Copper**
- D) Wood

6. What device is used in a circuit to provide electrical resistance?

- A) Resistor**
- B) Battery
- C) Switch
- D) Insulator

7. Which biological process in the human body relies on electrical impulses to send signals to the brain?

- A) Digestion
- B) Respiration
- C) Nervous system activity**
- D) Circulation

8. What is the main purpose of a battery in an electrical circuit?

- A) To produce heat
- B) To provide a source of chemical energy to create voltage**
- C) To measure magnetic fields
- D) To act as a circuit breaker

9. Which of these is a non-conductive material often used to coat electrical wires for safety?

- A) Plastic**
- B) Aluminum
- C) Gold
- D) Iron

10. In a simple electrical circuit, what does a switch do?

- A) Increases the voltage
- B) Changes the current direction
- C) Opens or closes the path for current flow**
- D) Measures the resistance

11. What instrument is used to detect the presence of electrical current?

- A) Galvanometer**
- B) Thermometer
- C) Barometer
- D) Hygrometer

12. Which of these describes a closed circuit?

- A) A broken wire
- B) A path that allows current to flow**
- C) A disconnected battery
- D) An air gap in the wire

13. What force causes the attraction and repulsion between electrically charged objects?

- A) Magnetic force
- B) Gravitational force
- C) Electromagnetic force**
- D) Frictional force

14. What does a solar cell convert into electricity?

- A) Wind energy
- B) Geothermal energy
- C) Sunlight**
- D) Kinetic energy

15. Which bird's ability to migrate is believed to be aided by sensing the Earth's magnetic field, a concept related to electromagnetism?

- A) Penguin
- B) Pigeon**
- C) Ostrich
- D) Flamingo

16. What component is used in electrical circuits to protect them from excessive current?

- A) Fuse**
- B) Capacitor
- C) Transistor
- D) Transformer

17. What is the natural state of an atom regarding its electrical charge when it has an equal number of protons and electrons?

- A) Positively charged
- B) Negatively charged
- C) Electrically neutral**
- D) Superconductive

18. Which property of a wire determines how much it resists the flow of electricity?

- A) Temperature only
- B) Length, material, and thickness**
- C) Color of the insulation
- D) Weight of the wire