

Electricity T/G/T Questions

1. A neutral material loses some electrons. Its charge is now:
2. The three subatomic particles are:
3. The uncharged subatomic particle is the:
4. Do positive or negative charges move in electricity, and why?
5. Two items are attracted to one another. Name the **two** reasons this could happen.
6. Two items repel one another. What would cause this to happen?
7. How are gravity and electricity different? (name one way)
8. The “push” that makes electrons move is called:
9. The flow of charge is known as:
10. Opposition to current is called:
11. What units are used for current?
12. What units are used for voltage?
13. What units are used for resistance?
14. What are two ways to reduce the resistance of an object?
15. How are AC and DC different?
16. Why do we use AC and not DC to send power from power plants to our homes?
17. Contrast the resistance of a 25W light bulb with a 50W light bulb.
18. If you put two identical 2 ohm resistors in series, what is the total resistance of the circuit?
19. If you double the resistance of a circuit, how is current affected?
20. If voltage applied to a circuit, is cut in half, how is current affected?
21. What units are used for electric power? (or any power, for that matter...)
22. What is the purpose of a fuse or circuit breaker?
23. Would you want a fuse or circuit breaker to be wired in **Series or Parallel** with the rest of the items on its circuit?
24. Where is most of the atom’s mass?
25. Neutrons have what charge?
26. A neutral atom gains two electrons. Its charge is now:
27. If you put two identical 2 ohm resistors in parallel, what is the total resistance of the circuit?
28. A 120 Volt circuit has 12 ohms of resistance. How much current will it have?
29. A 3V circuit is experiencing a 6 Amp current. What is its resistance?
30. What type of electric current involves the net movement of electrons?
31. Conductors and Insulators vary depending on how easily _____ move through them.
32. Neutral charge occurs when _____ and _____ are found in even numbers.
33. The unit for mass of particles in the atom is the:
34. Which is the least massive subatomic component? (of the main three)
35. Contrast AC and DC in at least two ways.

Electricity T/G/T Answers

1. Positive
2. Protons, Neutrons, Electrons
3. Neutron
4. Negative charges usually move because electrons are smallest.
5. They could be charged oppositely, or could be neutral and charged by induction.
6. They must have the same charge.
7. Gravity only attracts; electricity may attract or repel. AND Gravity is based on mass, electricity is based on charge. AND Gravity is MUCH LESS powerful than electricity
8. Voltage
9. Current
10. Resistance
11. Amperes (Amps)
12. Volts
13. Ohms
14. Decrease length, increase thickness, lower temperature, change material.
15. In AC, electrons move back and forth many times per second. In DC, electrons move from one end of a circuit to another.
16. We can change the voltage easily with AC, and make it go longer distances with fewer losses.
17. a 50W light bulb has less (half) the resistance of the 25W.
18. 4 ohms (double)
19. Current will be halved.
20. Current will be halved.
21. Watts
22. Protecting a circuit from too much current
23. Series
24. The nucleus
25. Neutral
26. negative (-2)
27. 1 ohm (half)
28. 10 amps
29. 0.5 Ohms
30. Direct Current (DC)
31. electrons
32. protons and electrons (or positives and negatives)
33. a.m.u. = atomic mass unit
34. the electron
35. (multiple answers possible) AC – electrons move back and forth many times per second (60Hz)
DC – electrons have net movement in one direction
AC – voltage may be increased or decreased using a transformer (high voltage possible), DC cannot.
AC – used to get electricity transmitted from one place to another, DC used in most electronics.