

1) What does LED stand for? (Session 6 As well as in Student Science Dictionary)

2) Which electronic componet is designed to hold an electric charge? (RCA 2)

- a) Chargeitor
- b) Resistor
- c) Diode
- d) Capacitor

3) Kirkoffs first law states that the current flowing into a junction equals the current flowing out. Assume wires carrying 9, 12, and 15 amps flow into a junction, and three wires carry current away. If two wires combined take away 19 amps away, how much does the last wire carry? (RCA 2)

- a) 22
- b) 15
- c) 17
- d) 18

4) A _____ is an electronic component that limits or controls the amount of current flowing through a circuit. (Technology Shaping Our World Book: Page 213)

5) A diode is an electronic device that switches electric currents on and off and is made of semiconductor material. If false, what is the correct answer? (Technology Shaping Our World Book: Page 216)

- a) True
- b) False

Match the correct units for the following: (These are used throughout the sessions)

- | | |
|---------------------|----------|
| 6) _____ Voltage | a) Amps |
| 7) _____ Current | b) Volts |
| 8) _____ Resistance | c) Ohms |

9) A single chip containing a lot of electrical components that can replace whole systems of separate components is called what? (Session 3 as well as RCA 3)

- a) Complex Circuit
- b) Inverted Circuit
- c) System Circuit
- d) Integrated Circuit

Match the electrical component with its use (Session 3)

- | | |
|----------------------|--------------------------------------------|
| 10) _____ Transistor | a) Limits the amount of current flowing |
| 11) _____ Diode | b) Temporarily stores energy |
| 12) _____ Capacitor | c) Switches electrical currents on and off |
| 13) _____ Resistor | d) Allows current to flow in one direction |

14) Explain what would be a better semiconductor (Plastic or Silicon) of electricity and why? (Session 3 RCA 5)

15) Ohms law is an equation that shows a relationship among voltage, current, and resistance. What is the equation for Ohms Law? (RCA 4)

16) The number of amperes of current drawn from an electrical circuit is equal to voltage divided by the resistance. If an Xbox 360 has a resistance of 35 ohms, how many amperes will it draw from a normal electrical line which is 120 volts. (RCA 4)

Hint= $I=V/R$ (SHOW YOUR WORK)

17) A very common way of making electrical connections is what? (Hint) you do it in session 5,6, and 7. (Session 4)

- a) Soldering
- b) Twisting wires together
- c) Snap jointing
- d) adhesive bonding

18) What is the correct name for a thin board made of an insulating material with patterns etched in a thin layer of copper on the surface to form conducting paths? (Session 5)

- a) Integrated Circuit
- b) Analog Circuit
- c) Insulated Circuit
- d) Printed Circuit