







1. When the AWG gauge of a conductor decreases, the resistance per foot **decreases**.
2. What of the following represents Ohm's Law? **$V=I \times R$**
3. Before servicing a capacitive circuit, the capacitor must be **discharged**.
4. A safety ground conductor is usually color coded **green**.
5. The total resistance of resistors wired in a parallel circuit will be **less than the smallest resistance**.
6. Before connecting an ohm meter to a circuit, you should first **check the circuit with a voltmeter to make sure the circuit is not powered**.
7. What can cause an excessive voltage drop? **All of the above: Too much resistance, Loose termination, Defective component**.
8. All basic electronic circuits must have a power supply, conductor and a **load**.
9. A light bulb draws 6 amps. The voltage on the circuit is 24 volts. Using Ohm's Law, what is the resistance? **4 Ohms**
10. Single phase motor speed (RPM) is determined by the **number of stator poles**.
11. According to OSHA, high voltage safety practices do not include **constant monitoring for line voltage**.
12. How are fuses tested? **Amps & Volts**
13. To measure the current draw of a coil, the ammeter should be connected **in series with energized coil**.
14. A technician checks resistance between a motor coil and the motor casing. The meter reads 760 Ω . Does the reading indicate a good condition for safe operation? **No**
15. What is the primary purpose of a capacitor? **Stores electrical potential energy**
16. On a 3 phase, 480VAC, 60 hertz power supply, what is the cycle? **60 hertz**
17. When using a voltmeter to measure the voltage drop across a resistor, the two leads are **connected one on each side of the resistor while powered on**.
18. To reverse the direct ion of rotation in a 3-phase motor **change the position of any two supply wires**.
19. What is the name for the flow of electrons in an electrical circuit? **Current**
20. A device used to control motor operation is a **contactor**.

21. What is impedance? **Opposition to alternating current flow.**
22. What is the schematic symbol for a diode? 
23. A thermocouple is **a temperature measurement device.**
24. To discharge an inductive load, such as a coil, it might be necessary to use a **snubber.**
25. Which of the following is equal to 3KV? **3000 volts**
26. Which of the following is equal to 100 milliamps? **0.1 amps**
27. Electrical power can be calculated with the following formula: $P=I \times V$. What does the letter I represent in this formula? **Current**
28. Testing a motor for bad coils may require **megging.**
29. A capacitor will allow AC current to pass. **True**
30. A seal-in contact is used **to maintain an energized coil when the momentary start switch has been released.**
31. The input impedance of the ideal ammeter is **zero resistance.**
32. The following symbol  represents **a chassis ground.**
33. The following symbol  represents **an iron core transformer.**
34. What type of switch is this?  **DPST**
35. Arcing across closed motor starter contacts may cause **contacts to weld preventing motor from stopping.**
36. In the diagram, what does NC stand for?  **Normally Closed**
37. A 3-phase, 480 VAC Y-transformer provides **277 VAC** phase to neutral.
38. How many watts of power are being used by a 240V heater drawing 5 amps? **1200 watts**
39. The unit used for measuring inductance is **the Henry.**
40. When voltage is applied across L1 & L2... **Lamp 1 will light up.**
41. When voltage is applied to L1 & L2 and switch A is pressed in... **Lamp 2 will light up.**
42. With voltage applied and switch B is pressed in... **Neither lamp will light up.**
43. With voltage applied, switch A & switch B are pressed in... **Neither lamp will light up.**

44. How many switches can be connected to a contactor coil control circuit? **Unlimited**
45. In the transformer diagram below what does the dot represent?  **Voltage polarity**
46. Two resistors of 20 Ohms each are connected in series. The total resistance of the circuit is **40** Ohms.
47. Technician #1 says that "An open transformer coil is indicated by a reading of 0 ohms on the ohmmeter." Technician #2 says that "A shorted transform coil is indicated by a reading of infinity on an ohmmeter." Who is correct? **Neither are correct**
48. A 480VAC, 3 phase, 4 pole motor at 60HZ will spin at what synchronous speed? **1800 rpm**
49. What is the technician's minimum approach distance? **3.5ft** (According to Electrical Safety Standard NFPA 70E, this is wrong. They state 12 inches.)
50. Fibrillation (erratic beating) of the heart can occur when exposed to **as little as 75 milliamps**.