


MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) A PTC circuit protector prevents excessive current flow in a circuit by _____. 1) _____
A) Changing to a very high resistance B) Grounding the current
C) Burning open D) Opening a set of contacts
- 2) Which metal is the best conductor of electricity? 2) _____
A) Gold B) Copper C) Brass D) Silver
- 3) Technician A says that copper jumper cables are better than aluminum jumper cables. Technician B says that aluminum jumper cables are better than copper jumper cables. Which technician is correct? 3) _____
A) Technician A only B) Technician B only
C) Both technicians A and B D) Neither technician A nor B
- 4) What causes a fuse to blow? 4) _____
A) A decrease in circuit resistance
B) An increase in the current flow through the circuit
C) A sudden decrease in current flow through the circuit
D) Both A and B are correct
- 5) Six volt vehicle systems require _____ wires than 12 volt systems. 5) _____
A) Smaller B) Equal C) Larger D) None of these
- 6) Which of these symbols represents a fuse in an electrical diagram? 6) _____
A) === B) --- C)  D) None of these
- 7) Two technicians are discussing fuse testing. Technician A says that a test light should light on both test points of the fuse if it OK. Technician B says that the fuse is defective if a test light only lights on one side of the fuse. Which technician is correct? 7) _____
A) Technician A only B) Technician B only
C) Both technicians A and B D) Neither technician A nor B
- 8) Which type of fuse can handle up to 80 amps? 8) _____
A) ATO B) Mini C) Maxi D) None of these
- 9) A braided wire running from the negative battery terminal to the body of a vehicle is known as a _____. 9) _____
A) Ground strap B) Facilitating circuit
C) Redundant source D) None of these
- 10) A twisted pair circuit has wire with at least _____ turns per foot. 10) _____
A) 24 B) 5 C) 9 D) 12
- 11) The skin effect involves _____ current flowing around the outside of a circuit. 11) _____
A) AC B) DC C) Equal D) None of these

- 12) Thick wires have a _____ AWG rating than thin wires. 12) _____
 A) Lower B) Higher
- 13) A metric wire size of 2.0 mm² is equivalent to ____ AWG size. 13) _____
 A) 2 ga. B) 20 ga. C) 14 ga. D) 10 ga.
- 14) The type of solder that should be used for electrical work is _____. 14) _____
 A) 60/40 with no flux B) Rosin core
 C) 50/50 with acid paste flux D) Acid core
- 15) Wire A has a diameter of 0.032 inches. Wire B has a diameter of 0.102 inches and an AWG rating of 10. Which of these is MOST likely to be the AWG rating of Wire A? 15) _____
 A) 20 ga. B) 12 ga. C) 14 ga. D) 5 ga.
- 16) Which of these is the recommended gauge wire for automotive speakers? 16) _____
 A) 10 ga. B) 20 ga. C) 0 ga. D) 00 ga.
- 17) Stranded copper wire is used in most automotive electrical circuits because it _____. 17) _____
 A) Bends more easily than solid wire B) Is an inexpensive but excellent conductor
 C) Both A and B D) Neither A nor B
- 18) A technician is performing a wire repair on a circuit under the hood of a vehicle. Technician A says to use solder and adhesive-lined heat shrink tubing or a crimp and seal connector. Technician B says to solder and use electrical tape. Which technician is correct? 18) _____
 A) Technician A only B) Technician B only
 C) Both technicians A and B D) Neither technician A nor B
- 19) What is a "CPA"? 19) _____
 A) Cold pack adapter B) Caller placement adapter
 C) Caliper pad adjuster D) Connector position assurance
- 20) Which of these wires is MOST likely used for starter motor high current circuits? 20) _____
 A) 20 ga. B) 0 ga. C) 18 ga. D) 14 ga.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 21) Wiring that is covered with orange conduit may contain wiring with voltage levels between 42 and 100 volts. 21) _____

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- 22) What is the purpose of electrical conduit? 22) _____
 A) Keeps dust off of the wiring
 B) Temporary covering only needed for vehicle assembly
 C) Dresses up the underhood area
 D) Covers and protects wiring
- 23) The higher the AWG number, _____. 23) _____
 A) The thicker the insulation B) The smaller the wire diameter
 C) The larger the wire diameter D) The more strands in the conductor core

24) Many ground straps are uninsulated and braided because _____. 24) _____
A) They are more flexible to allow movement of the engine without breaking the wire
B) They are less expensive than conventional wire
C) They help dampen radio-frequency interference (RFI)
D) Both A and C are correct

25) Metric wire size is measured in units of _____. 25) _____
A) Meters
B) Cubic centimeters
C) Cubic millimeters
D) Square millimeters

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

26) A wiring terminal is usually made of metal. 26) _____

27) A MEGA fuse is usually rated at no more than 50 amps. 27) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

28) Which statements are true about wire, terminals, and connectors? 28) _____
A) A wire is called a lead, and the metal end is a connector
B) A connector is usually a plastic piece where the terminals lock in
C) A lead and a terminal are the same thing
D) Both A and C

29) A 10 amp fuse is normally what color? 29) _____
A) Blue
B) Green
C) Yellow
D) Red

30) A 200 amp circuit that is 25 feet long should use wire of which AWG rating? 30) _____
A) 16 ga.
B) 18 ga.
C) 2 ga.
D) 14 ga.