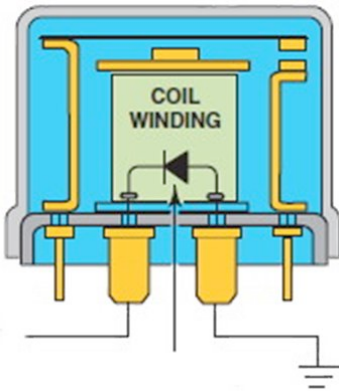


Name _____

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

- 1) To forward bias a silicon diode the _____. 1) _____
- A) voltage at the anode must exceed the voltage at the cathode by 0.5 to 0.7 volt
 - B) voltage at the cathode must exceed the voltage at the anode by 0.3 to 0.5 volt
 - C) voltage at the anode must exceed the voltage at the cathode by 0.3 to 0.5 volt
 - D) anode must be connected to a resistor (300-500 ohms) and 12.0 volts, with the cathode also connected to 12.0 volts

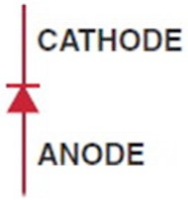
- 2) What is the purpose of this component (arrow) in this schematic? 2) _____



- A) To control voltage spikes
 - B) To hold the relay on once it is energized
 - C) To protect the ground connection
 - D) To protect the relay incase of reverse polarity
- 3) If a vehicle computer fails, what should the technician do before replacing the computer? 3) _____
- A) Check the resistance of all computer controlled relays and solenoids
 - B) Replace the fuel injectors
 - C) Drain the fuel tank and connect the battery
 - D) Ground the frame of the vehicle to a good earth ground to prevent ESD

4) What does this symbol represent?

4) _____



- A) A diode
- B) A relay
- C) A zener diode
- D) An LED

5) Another name for a ground is _____.

5) _____

- A) logic low
- B) zero
- C) reference low
- D) All of the above

6) A diode installed across a coil with the cathode toward the battery positive is called a(n) _____.

6) _____

- A) clamping diode
- B) forward-bias diode
- C) SCR
- D) transistor

7) A semiconductor is a material _____.

7) _____

- A) with fewer than four electrons in the outer orbit of its atoms
- B) with more than four electrons in the outer orbit of its atoms
- C) with exactly four electrons in the outer orbit of its atoms
- D) determined by other factors besides the number of electrons

8) Which of these is an NPN transistor?

8) _____



- A) A
- B) B
- C) Both A and B
- D) Neither A nor B

9) Clamping diodes _____. 9) _____
A) are connected into a circuit with the positive voltage source to the cathode and the negative voltage to the anode
B) are called despiking diodes
C) can suppress transient voltages
D) Are all of the above

10) A zener diode is normally used for voltage regulation. A zener diode, however, can also be used 10) _____
for high voltage spike protection if connected _____.
A) positive to anode, negative to cathode
B) positive to cathode, ground to anode
C) negative to anode, cathode to a resistor then to a lower voltage terminal
D) Both A and C

Answer Key

Testname: AEEP8_12A

1) A

Page Ref: 175

2) A

Page Ref: 177

3) A

Page Ref: 187

4) A

Page Ref: 175

5) D

Page Ref: 186

6) A

Page Ref: 176

7) C

Page Ref: 173

8) A

Page Ref: 182

9) D

Page Ref: 176

10) B

Page Ref: 176