

Name _____

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

1) Which of these is an NPN transistor?

1) _____



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

2) A semiconductor is a material _____.

2) _____

- 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

3) "Breakdown voltage" is the voltage at which a Zener diode will do which of these?

3) _____

- A) Allow reverse current to flow
- B) Stop the flow of reverse current
- C) Sustain damage as a result of current overload
- D) Stop the flow of either forward or reverse current

4) Technician A says that circuits using semiconductors may also be known as solid state circuits. Technician B says that the process of introducing a precise amount of impurity to a pure semiconductor material is known as doping. Which technician is correct?

4) _____

- A) Technician A only
- B) Technician B only
- C) Both technicians
- D) Neither technician

5) If a vehicle computer fails, what should the technician do before replacing the computer?

5) _____

- 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

- 6) A diode installed across a coil with the cathode toward the battery positive is called a(an) _____ 6) _____
- A) Clamping diode
 - B) Forward-bias diode
 - C) SCR
 - D) Transistor
- 7) Faults or failures in electronic components could be caused by all of the following EXCEPT _____ 7) _____
- A) Loose connector terminals
 - B) A loose alternator belt
 - C) Jumper cables reversed when jump-starting
 - D) A voltage spike
- 8) Which device is used in alternators to change AC to DC? 8) _____
- A) Diode
 - B) Transistor
 - C) Capacitor
 - D) None of these
- 9) To avoid damage from an electrostatic discharge, the technician should before handling sensitive electronic components _____. 9) _____
- A) Wear dark clothing
 - B) Be sure to wear insulated shoes
 - C) Touch the housing of the component before removing it from the protective cover
 - D) Touch a metal surface on the vehicle
- 10) What is the purpose and function of an inverter? 10) _____
- A) To change the polarity of DC voltages
 - B) To change low DC voltage to high DC voltage
 - C) To change DC voltage to AC voltage
 - D) To change AC voltage to DC voltage

Answer Key

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- 1) A
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- 2) C
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- 3) A
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- 4) C
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- 5) A
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- 6) A
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- 7) B
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- 8) A
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- 9) D
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- 10) C
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