

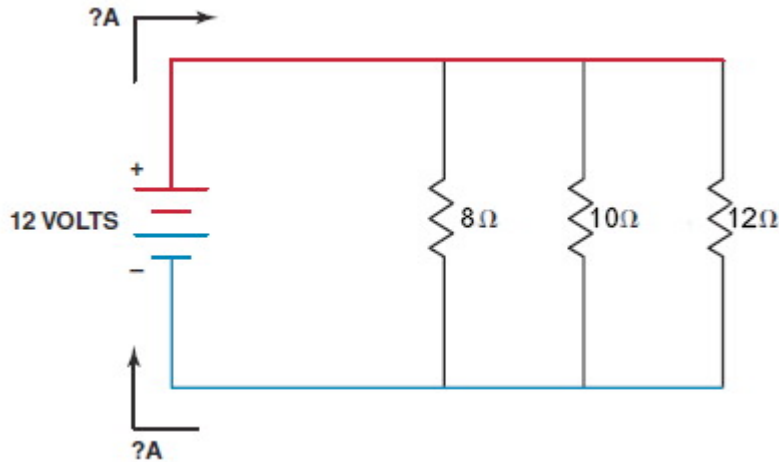
Name _____

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

- 1) More electrical current will tend to flow through the branch of a parallel circuit with _____ resistance. 1) _____
- A) Lowest
 - B) Highest
 - C) Infinite
 - D) None of these
- 2) Two bulbs are connected in parallel to a 12-volt battery. One bulb has a resistance of 6 ohms and the other bulb has a resistance of 2 ohms. Technician A says that only the 2-ohm bulb will light because all of the current will flow through the path with the least resistance and no current will flow through the 6-ohm bulb. Technician B says that the 6-ohm bulb will be dimmer than the 2-ohm bulb. Which technician is correct? 2) _____
- A) Technician A
 - B) Technician B
 - C) Both technicians
 - D) Neither technician
- 3) A vehicle has four parking lights all connected in parallel and one of the bulbs burns out. Technician A says that this could cause the parking light fuse to blow (open). Technician B says that it would decrease the current in the circuit. Which technician is correct? 3) _____
- A) Technician A
 - B) Technician B
 - C) Both technicians
 - D) Neither technician
- 4) Technician A says that the sum of the voltage drops in a series circuit should equal the source voltage. Technician B says the current (amperes) varies depending on the value of the resistance in a series circuit. Which technician is correct? 4) _____
- A) Technician A
 - B) Technician B
 - C) Both technicians
 - D) Neither technician
- 5) Technician A says that Ohm's law can be used to determine circuit current flow if total circuit resistance and total voltage are known. Technician B says that Ohm's law can be used to calculate the unknown resistance of a load in a circuit if total current and source voltage are known. Which technician is correct? 5) _____
- A) Technician A
 - B) Technician B
 - C) Both technicians
 - D) Neither technician

- 6) Two light bulbs are wired in series and one bulb burns out (opens.) Technician A says that the other bulb will work. Technician B says that the current will increase in the circuit because one electrical load (resistance) is no longer operating. Which technician is correct? 6) _____
- A) Technician A
 - B) Technician B
 - C) Both technicians
 - D) Neither technician

- 7) What is the total current flow in this parallel circuit? 7) _____



- A) 3.7 A
- B) 0.4 A
- C) 2.5 A
- D) Not enough information

- 8) The current flowing into each junction of a parallel circuit _____ the current flow at the junction on the opposite end of that branch. 8) _____
- A) Equals
 - B) Is less than
 - C) Is more than
 - D) None of these

- 9) If a 12-volt battery is connected to a series circuit with three resistors of 2 ohms, 4 ohms, and 6 ohms, how much current will flow through the circuit? 9) _____
- A) 1 amp
 - B) 2 amp
 - C) 3 amp
 - D) 4 amp

- 10) The sum of the voltage drops in a series circuit equals the _____. 10) _____
- A) Amperage
 - B) Resistance
 - C) Source voltage
 - D) Wattage

Answer Key

Testname: AAEE_3B

1) A

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2) B

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3) B

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4) C

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5) C

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6) D

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7) A

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8) A

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9) A

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10) C

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