

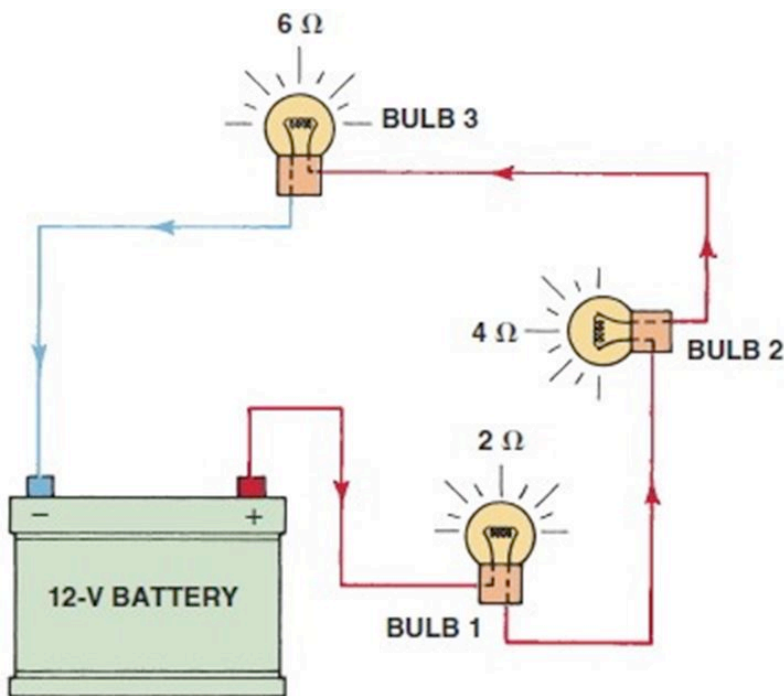
Name _____

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

1) A series circuit has three resistors of 4 ohms each. The voltage drop across each resistor is 4 volts. Technician A says that the source voltage is 12 volts. Technician B says that the total resistance is 18 ohms. Which technician is correct? 1) _____

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

2) Which one of the bulbs in this circuit will drop (use up) the most voltage? 2) _____



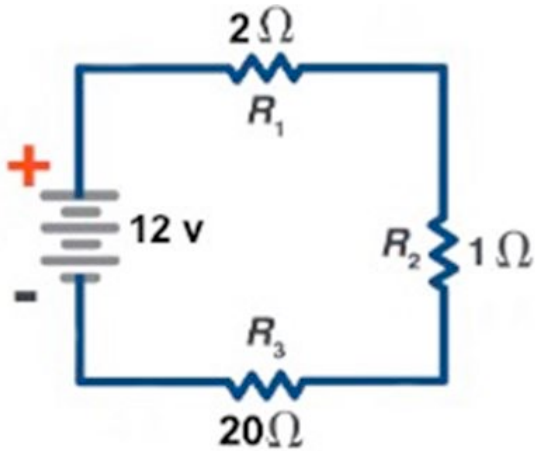
- A) Bulb 3
- B) Bulb 2
- C) Bulb 1
- D) They will all drop the same amount of voltage.

3) Three light bulbs are wired in series. A fourth bulb is connected to the circuit in series. Technician A says that the total voltage drop will increase. Technician B says that the current (amperes) will decrease. Which technician is correct? 3) _____

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

4) How much current will flow in this circuit?

4) _____



- A) 2 A
- B) 6 A
- C) 0.5 A
- D) 3 A

5) Testing voltage drop is a _____ test.

5) _____

- A) Dynamic
- B) Static
- C) Redundant
- D) None of these

6) 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?

6) _____

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

7) If the resistance and the voltage are known, what is the formula for finding the current (amperes)?

7) _____

- A) $E = I \times R$
- B) $I = E \times R$
- C) $R = E \times I$
- D) $I = \frac{E}{R}$

8) In a series circuit, _____.

8) _____

- A) Total circuit resistance is equal to the sum of all resistances in the circuit
- B) Current flow is the same at any point in the circuit
- C) Both A and B
- D) Neither A nor B

9) A series circuit has two 10-ohm bulbs. A third 10-ohm bulb is added in series. Technician A says that the three bulbs will be dimmer than when only two bulbs were in the circuit. Technician B says that the current in the circuit will increase. Which technician is correct? 9) _____

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

10) Ohm's law takes into consideration the heat generated by resistance in an energized circuit. 10) _____

- A) True
- B) False

Answer Key

Testname: AEE6_6B

1) A

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2) A

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3) B

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4) C

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5) A

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6) C

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7) D

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8) C

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9) A

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10) B

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