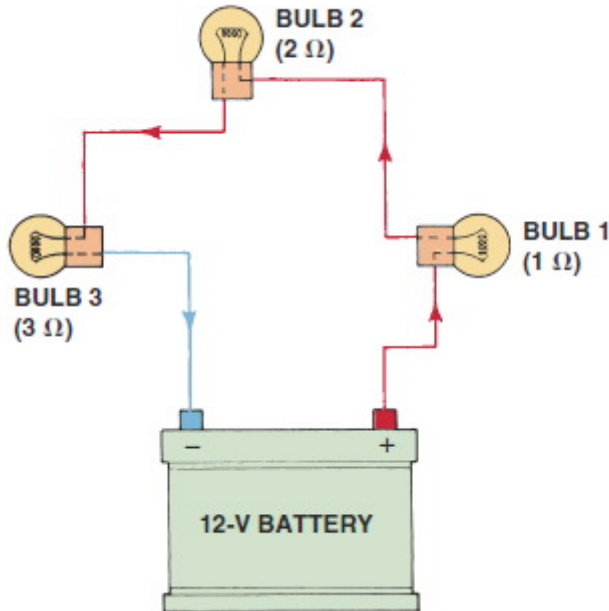


Name _____

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

1) What is the total resistance in this circuit?

1) _____



- A) 6 ohms
- B) 12 ohms
- C) 3 ohms
- D) None of these

2) More electrical current will tend to flow through the branch of a parallel circuit with _____ resistance.

2) _____

- A) Lowest
- B) Highest
- C) Infinite
- D) None of these

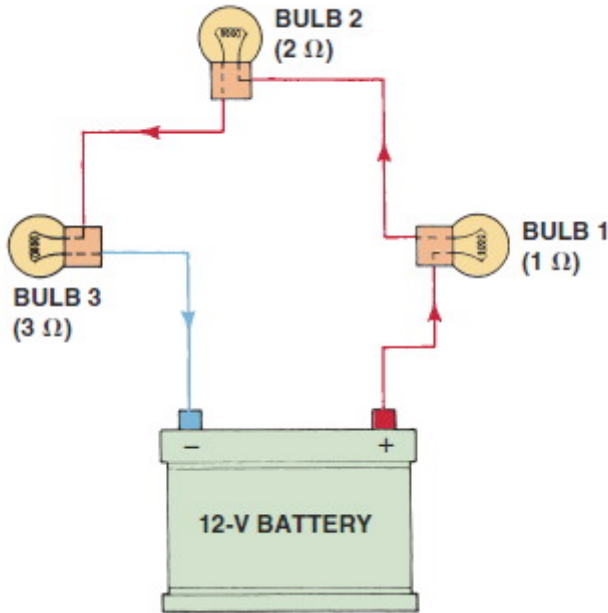
3) Two bulbs are connected in parallel to a 12-volt battery. One bulb has a resistance of 6 ohms and the other bulb has a resistance of 2 ohms. Technician A says that only the 2-ohm bulb will light because all of the current will flow through the path with the least resistance and no current will flow 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?

3) _____

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

- 4) Voltage drop is a better measurement of resistance than testing static resistance because _____. 4) _____
- A) Current flow creates heat which adds to circuit resistance
 - B) The resistance specification for the component is not required for diagnosis
 - C) Both A and B
 - D) Neither A nor B

- 5) How much current will flow in this circuit? 5) _____



- A) 2 amps
- B) 12 amps
- C) 3 amps
- D) None of these

- 6) Calculate the total resistance and current in a 12 volt parallel circuit with three resistors of 4 ohms, 8 ohms, and 16 ohms, using any one of the five methods (calculator suggested). What is the total resistance and current? 6) _____
- A) 22 ohms (0.4 amperes)
 - B) 140 ohms (18 amperes)
 - C) 4 ohms (3.0 amperes)
 - D) 2.3 ohms (5.3 amperes)

- 7) The total circuit resistance of a parallel circuit is always _____ the lowest resistance present in any branch of the circuit. 7) _____
- A) Less than
 - B) More than
 - C) Equal to
 - D) None of these

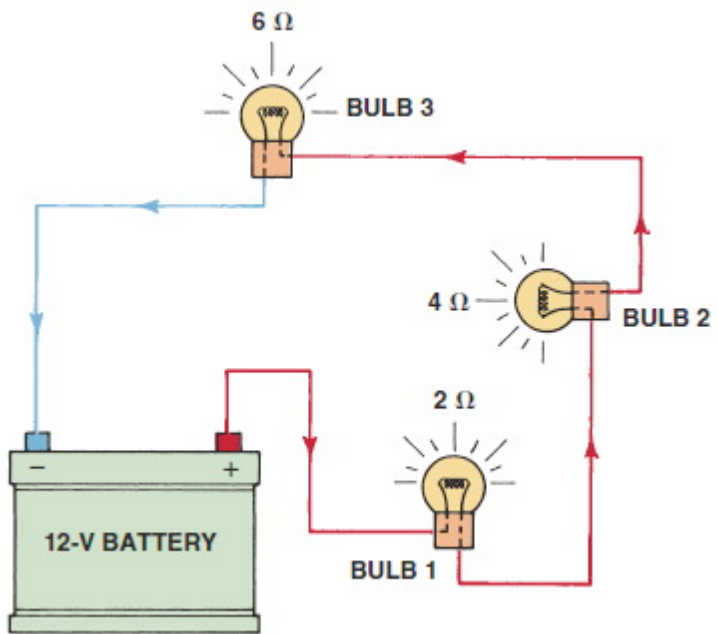
8) Technician A says that the sum of the voltage drops in a series circuit should equal the source voltage. Technician B says the current (amperes) varies depending on the value of the resistance in a series circuit. Which technician is correct? 8) _____

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

9) Technician A says that electronic calculators have a memory function that can be used to calculate resistance, current, and voltage values for a parallel circuit. Technician B says to separate components of a series-parallel circuit to simplify calculations. Which technician is correct? 9) _____

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

10) Which one of the bulbs in this circuit will drop (use up) the most voltage? 10) _____



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

Answer Key

Testname: AAEE_3A

- 1) A
Page Ref: 19
- 2) A
Page Ref: 22
- 3) B
Page Ref: 23
- 4) C
Page Ref: 20
- 5) A
Page Ref: 19
- 6) D
Page Ref: 24
- 7) A
Page Ref: 22-23
- 8) C
Page Ref: 21
- 9) C
Page Ref: 24
- 10) A
Page Ref: 19