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Question 1: **Ohm's law** is always obeyed **across all** electronic devices:

- A. True
- B. False

Question 2: Three 10-Ohm **resistors in series** made from the same material always share the same

- A. current
- B. voltage
- C. resistivity
- D. all these on the list

Question 3: Ohm's law in AC and DC domain treats the **equivalent** resistance (i.e. combining more than one resistors into one) **the exact same way**. This statement is

- A. True
- B. False

Question 4: In the lab we experimented on resistors in series in the AC domain. When we increased the frequency **without changing anything else**, we observed that the current of the circuit

- A. Changed
- B. Remained the same

Question 5: Momentum exchange between electrons is one of the parameters that **determines the resistivity** of a wire. This statement is

- A. Incorrect
- B. Correct

Question 6: The **relative mean square** (rms) quantity for electric potential in AC is ALWAYS

- A. Greater than the numerical average of AC electric potential
- B. Less than the numerical average of AC electric potential
- C. Zero

Question 7: The basic function of an oscilloscope is to return the electric potential difference across **ANY** element in a circuit with respect to

- A. the voltage source
- B. ground
- C. none of these on the list

Question 8: The resistance of the **semi-conductor** we studied in the lab

- A. Exhibited a normal Ohmic behavior
- B. Exhibited a normal non-Ohmic behavior

Question 9: The **phase difference** between the **voltages** of two resistors in **series** connected to AC depends on

- A. Their respective current
- B. Their respective resistivity
- C. Frequency
- D. There is no phase difference (i.e. zero)

Question 10: Both Kirchhoff rules are NOT valid for AC current. This statement is

- A. True
- B. False
- C. Depends on the AC frequency