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1. The current transported in the direction of conventional current per area is equal to
 - A) drift velocity
 - B) resistance
 - C) current density
 - D) capacitance
 - E) potential difference

 2. In a straight wire with current 3 A and cross-sectional area 4 m^2 , what is the magnitude of the current density in the wire?
 - A) 0.5 A/m^2
 - B) 0.75 A/m^2
 - C) 1.33 A/m^2
 - D) 3 A/m^2
 - E) 4 A/m^2

 3. The drift velocity in a wire is probably closest to
 - A) 10^{-14} m/s
 - B) 10^{-4} m/s
 - C) 1 m/s
 - D) 10^4 m/s
 - E) 10^{14} m/s

 4. Charge carrier density is best defined as
 - A) the number of mobile electrons per area
 - B) the number of mobile electrons per volume
 - C) the number of mobile protons per length
 - D) the number of mobile protons per area
 - E) the number of mobile protons per volume

 5. Drift velocity is best defined as
 - A) the relationship between current and current density
 - B) the number of mobile electrons per volume
 - C) the number of mobile electrons per length
 - D) the flux of the current density through a given area
 - E) the average speed of the motion of the electrons in a wire

 6. The ratio of the electric field to the current density is equal to
 - A) conductivity
 - B) resistivity
 - C) resistance
 - D) capacitance
 - E) potential difference

 7. The reciprocal of resistivity is
 - A) flux
 - B) electric potential
 - C) current
 - D) conductivity
 - E) drift velocity

 8. What type of relationship is exhibited between conductivity and resistivity?
 - A) direct
 - B) linear
 - C) exponential
 - D) inverse squared
 - E) inverse
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Answer Key
Internal Resistance MC Questions [Mar 28, 2011]

1. C
 2. B
 3. B
 4. B
 5. E
 6. B
 7. D
 8. E
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Name _____

Class _____

Date _____

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2. _____

3. _____

4. _____

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7. _____

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