Chapter 27 Current and Resistance

27-2 Electric current

27-02

Question 692 0.39-33%

The sum of the currents entering a junction equals the sum of the currents leaving that junction is a consequence of:

(a) Newton's second law
(b) Coulomb's law
(c) conservation of charge
(d) Ampere's law
(e) conservation of energy

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Question 693

If 4.7*10**(16) electrons pass a particular point in a wire every minute, what is the current in the wire?

(a) 2.9*10**(-3) A.
(b) 9.1*10**(-3) A.
(c) 1.3*10**(-4) A.
(d) 2.9*10**(-5) A.
(e) 4.7*10**(-3) A.

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Question 694

A portion of a circuit is shown in figure (6), with the values of the currents given for some branches. What is the direction and value of the current I?

Figure 6

(a) Up, 4 A.
(b) Down, 4 A.
(c) Down, 2 A.
(d) Up, 6 A.
(e) Down, 6 A.

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Question 695 0.54-55%

Conduction electrons move to the right in a certain wire. This indicates that:

(a) the current density points to the left but the direction of the electric field is unknown.
(b) the current density and the electric field both point to the right.
(c) the current density points to the right but the electric field points to the left.
(d) the current density points to the left but the electric field points to the right.
(e) the current density and the electric field both point to the left.

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