1. . A circuit consisting of a resistor and a battery. What happens to the current in the resistor when the voltage is doubled and the resistance remains the same? (A) It is doubled(B) It is quadrupled(C) It is halved(D) It is quartered(E) It remains the same

2. . A circuit consisting of a resistor and a battery.What happens to the power dissipated in the resistor when the resistance is quadrupled and the voltage remains constant? (A) It is doubled(B) It is quadrupled(C) It is halved(D) It is quartered(E) It remains the same

3. . Which of the following affects the resistance of a wire? I. The material from which it is made II. The length of the wire III. The diameter of the wire (A) I only (B) II only (C) I and II only (D) I and III only (E) I, II, and III

4. .Two resistors, R1 and , R2 are identical, but the potential difference across R1 is half the potential difference across R2 . What is the ratio of the current in to the current in ? (A) ¼ (B) ½ (C) 1 (D) 2 (E) 4

5. . Two identical resistors, arranged in parallel. If a third identical resistor is added in parallel, what is the ratio of the new equivalent resistance to the old? (A) 4/9 (B) 2/3 (C) 1 (D) 3/2 (E) 9/4

6. . Two identical resistors, arranged in parallel. Assuming the voltage is kept constant, what is the ratio between the new current and the old current when a third identical resistor is added in parallel with the earlier two? (A) 4/9 (B) 2/3 (C) 1 (D) 3/2 (E) 9/4

7. . How much heat is produced in a 5 ohm resistor in 10 s when a current of 2 A flows through it? (A) 2 J (B) 10 J (C) 20 J (D) 100 J (E) 200 J

8. . Two identical capacitors are arranged in a circuit. What is the ratio of the equivalent capacitance of the circuit when the capacitors are in series to that when they are in parallel? (A) 1/4 (B) 1/2 (C) 1 (D) 2 (E) 4

9. . A potential difference of exists between two plates of a parallel-plate capacitor with capacitance C. A dielectric with a dielectric constant of is then placed between the plates of the capacitor. What is the energy stored in the capacitor? (A) ½ (C/ )( )2 (B) ½ ( )( )2 (C) ½ C( )2 (D) ½ C (E) ½ (

10. . A dielectric is inserted into a capacitor while the charge on it is kept constant. What happens to the potential difference and the stored energy? (A) The potential difference decreases and the stored energy increases (B) Both the potential difference and the stored energy increase (C) The potential difference increases and the stored energy decreases (D) Both the potential difference and the stored energy decrease (E) Both the potential difference and the stored energy remain the same