Name:

Grade and Section: Score: /10.0

Date:

Quiz # 5 on Direct-Current Circuits

NEWTON SCHOOL OF BRIGHT MINDS INC.

GENERAL INSTRUCTIONS:

1.) Use No. 2 pencil only to shade your answer. To change your answer, neatly erase your old answer and shade the new one. You may request a scratch paper from the proctor whenever you need to.
2.) Scientific calculators are allowed while other electronic devices are prohibited.
3.) Any form of cheating in examinations or any act of dishonesty in relation to studies shall be subject to disciplinary action.

I. Multiple Choice. Shade the letter of the BEST answer (5 points).

1. In a parallel combination of resistors, the current is
   - (a) varying
   - (b) same
   - (c) greater in value
   - (d) lesser in value

2. In a series combination of resistors, the voltage drop is
   - (a) varying
   - (b) same
   - (c) greater value
   - (d) lesser value

3. What happens to the energy when the electron goes into the 2nd bulb after passing through the 1st bulb?
   - (a) greater energy
   - (b) lesser energy
   - (c) increasing power
   - (d) decreasing power

4. When resistors are connected in parallel, what happens to their resistance?
   - (a) more than the smallest resistance
   - (b) within the values of larges and smallest resistance
   - (c) less than the smallest resistance
   - (d) depends on the voltage drop

5. The Kirchhoff's rule on voltage drops is consistent with
   - (a) energy conservation
   - (b) impulse and momentum
   - (c) conservation of charge
   - (d) angular momentum conservation

II. True or False. Determine whether the statements are TRUE or FALSE by shading the BEST ANSWER (3 points).

6. When the capacitor is fully charged, the potential difference across the resistor becomes zero, the current becomes zero and the voltage appears now at the capacitor.
   - (a) True
   - (b) False

7. **Galvanometer** is a device used in detecting the presence and direction of electric current in the device.
   - (a) True
   - (b) False

8. Both ammeter and voltmeter are used to measure the resistance or power.

(a) True (b) False

III. Problem Solving. Solve the given problem. Write your GIVEN, REQUIRED, SOLUTION and box your final answer with proper statement (2 points).

9. How long would it take for the capacitor to reach 4.1 V if it has a **1** μF and connected with 2800 Ω resistor.