

Student Name: ..... 10 Adv./ Work sheet 1

For each physical quantity on the left, write the letter of the matching unit of measurement on the right.

- |       |                                  |            |
|-------|----------------------------------|------------|
| _____ | 1. charge                        | a. watt    |
| _____ | 2. potential energy              | b. ohm     |
| _____ | 3. current                       | c. coulomb |
| _____ | 4. resistance                    | d. joule   |
| _____ | 5. electric potential difference | e. ampere  |
| _____ | 6. power                         | f. volt    |

Circle the letter of the choice that best completes the statement.

7. A conventional current is the flow of \_\_\_\_\_.
- |                        |                      |
|------------------------|----------------------|
| a. alternating current | c. electrons or ions |
| b. electrons           | d. positive charge   |
8. The conservation of charge in a circuit implies that \_\_\_\_\_.
- |   |   |
|---|---|
| a. electrons cannot be created or destroyed | c. electrons can move through the circuit |
| b. the total amount of charge is constant   | d. all of the above                       |
9. The potential difference between two points in space is 1000 V, and 2 coulombs of charge is transferred from the point of lower potential to the point of higher potential. The amount of work done is \_\_\_\_\_.
- |                         |           |
|-------------------------|-----------|
| a. $2 \times 10^{-3}$ J | c. 1000 J |
| b. 500 J                | d. 2000 J |



18. A household's electric bill is \$56 for the month of February and the cost of electricity is \$0.12 per kilowatt-hour. The household used \_\_\_\_\_ of energy in this month.
- a. 6.7 kW
  - b. 467 kJ
  - c. 467 kWh
  - d. none of the above
19. A conducting wire has a resistance of  $0.02 \Omega/\text{m}$ . The power of this 100-m wire when it carries a current of 20 A is \_\_\_\_\_.
- a. 0.8 J/s
  - b. 8 W
  - c. 800 J
  - d. 800 W