Title: **Parallel Circuits** Quiz: 5

Course: Electrical Applications Unit: Electrical Theory CLO: 3

Name ANSWER KEY Grade 18 pts. Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall determine correct characteristics of a parallel circuit.
2. Student shall calculate various electrical quantities for a parallel circuit based on Ohm’s and Watt’s Laws.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Quiz. Grading shall be based on an answer key.

**Instructions**

Select the correct answer to the following multiple-choice questions.

1. Conductance is the \_\_\_\_\_\_\_\_\_\_\_ at which current can flow.
2. Ease
3. Hindrance
4. Impedance
5. Halting
6. Total resistance in a parallel circuit is always \_\_\_\_\_\_\_\_\_\_\_ than any branch resistance.
7. More
8. Less
9. Which branch dissipates the most power, the one with the largest or smallest resistance?
   1. Largest
   2. Smallest
10. If a fourth resistor is added in parallel to a three-resistor parallel circuit, the total current will?
    1. Increase
    2. Decrease
    3. Stay the same
11. In question #4, what will be the effect on total power?
    1. Increase
    2. Decrease
    3. Stay the same
12. What is the resistance if the resistor’s conductance is 250μS? 4kΩ
13. Calculate and record the values for the parallel circuit below.



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | P | I | R | E |
| R1 | 50W | 1A | 50Ω | 50V |
| R2 | 25W | 500mA | 100Ω | 50V |
| R3 | 100W | 2A | 25Ω | 50V |
| Total | 175W | 3.5A | 14.286Ω | 50V |