Title: **Trigonometry** Test: 10

Course: Electrical Applications Unit: Electrical Theory CLO: 3

Name ANSWER KEY Grade 25pts. Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall determine the third side of a triangle given two other sides.
2. Student shall apply trigonometric functions to produce appropriate quantities of a triangle.

**Assessment**

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

**Instructions**

Match the items listed with the components of a triangle.



1. C A. Theta
2. E B. Right Angle
3. D C. Hypotenuse
4. A D. Adjacent
5. B E. Opposite

**Instructions**

Determine the length of the unknown side given two other sides.

|  |  |  |  |
| --- | --- | --- | --- |
|  | a | b | c |
| 6. | 3 | 4 | 5 |
| 7. | 5.6 | 2.1 | 5.981 |
| 8. | 96.825 | 25 | 100 |
| 9. | 212 | 507.5 | 550 |
| 10. | 59.321 | 65 | 88 |
| 11. | 123 | 439.098 | 456 |

**Instructions**

Determine the length of the unknown side given one side and the angle.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | A | O | H | θ |
| 12. | 10.392 | 6 | 12 | 30˚ |
| 13. | 1 | 1 | 1.414 | 45˚ |
| 14. | 2.5 | 1.036 | 2.7 | 22.5˚ |
| 15. | 19.625 | 6 | 20.522 | 17˚ |
| 16. | 3.438 | 8.1 | 8.8 | 67˚ |
| 17. | 3.2 | 183.328 | 183.356 | 89˚ |

**Instructions**

Determine the angle of theta and length of the unknown side given the length of two sides.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | A | O | H | θ |
| 18. | 5 | 7.483 | 9 | 56.25˚ |
| 19. | 2 | 4 | 4.472 | 63.435˚ |
| 20. | 4.2 | 12.619 | 13.3 | 71.592˚ |
| 21. | 6.06 | 3.7 | 7.1 | 31.407˚ |
| 22. | 5.6 | 8.9 | 10.515 | 57.821˚ |
| 23. | 5.48 | 2.9 | 6.2 | 27.888˚ |

1. Trigonometry is a(n);
   1. Circular function
   2. An angular based function
   3. a and b
   4. None of the above
2. The sum of all the angles in a right triangle equals 360˚.
   1. True
   2. False