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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. The mass of an object is   |  |  |  | | --- | --- | --- | |  | a. | the force between the object and the earth. | |  | b. | a measure of the amount of matter in the object. | |  | c. | the amount of space the object occupies. | |  | d. | depends on the location of the object on the earth. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.2 - Define Matter. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. Any two objects are attracted to each other by \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | gravity | b. | electrostatic forces | |  | c. | magnetism | d. | all of them |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.2 - Define Matter. | | *KEYWORDS:* | Chemistry | |

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| 3. How is the weight of an object influenced when the gravitational force on the object is increased?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | it decreases | b. | it increases | |  | c. | it is unchanged | d. | it equals the mass |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.2 - Define Matter. | | *KEYWORDS:* | Chemistry | |

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| 4. The weight of an object is   |  |  |  | | --- | --- | --- | |  | a. | a measure of the gravitational force pulling the object toward the earth. | |  | b. | equal to the mass of the matter in the object. | |  | c. | a measure of the space occupied by the object. | |  | d. | the same at any location on the earth. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.2 - Define Matter. | | *KEYWORDS:* | Chemistry | |

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| 5. The fact that gold does not corrode is a \_\_\_\_\_\_ property   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | physical | b. | personal | c. | real | d. | chemical |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.3 - Differentiate between physical and chemical properties of matter. | | *KEYWORDS:* | Chemistry | |

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| 6. Which of the following represents a physical change in matter?   |  |  |  | | --- | --- | --- | |  | a. | A substance solidifies at 443 K. | |  | b. | A substance produces a gas and a solid when heated. | |  | c. | A substance burns when heated. | |  | d. | A substance changes color when exposed to air. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.4 - Differentiate between physical and chemical changes in matter. | | *KEYWORDS:* | Chemistry | |

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| 7. The melting of ice to liquid water is correctly classified as   |  |  |  | | --- | --- | --- | |  | a. | a chemical change. | |  | b. | a physical change. | |  | c. | both a chemical and a physical change. | |  | d. | neither a chemical nor physical change. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.4 - Differentiate between physical and chemical changes in matter. | | *KEYWORDS:* | Chemistry | |

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| 8. Which of the following is a physical property of matter?   |  |  |  | | --- | --- | --- | |  | a. | it does not burn | |  | b. | produces a gas when placed in an acid | |  | c. | freezes at −10°F | |  | d. | the surface turns black in air |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.3 - Differentiate between physical and chemical properties of matter. | | *KEYWORDS:* | Chemistry | |

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| 9. Which of the following is a chemical property of matter?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | color | b. | density | |  | c. | freezing point | d. | flammability |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.3 - Differentiate between physical and chemical properties of matter. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. As two clear liquid solutions are thoroughly mixed, a red solid forms. This change is most likely \_\_\_\_\_.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | physical. | b. | chemical. | |  | c. | neither chemical nor physical. | d. | both chemical and physical. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.4 - Differentiate between physical and chemical changes in matter. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. The limit of chemical subdivision of an element is the \_\_\_\_\_.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | atom | b. | molecule | c. | proton | d. | compound |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.2.1 - Describe Democritus' original idea of an atom. | | *KEYWORDS:* | Chemistry | |

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| 12. Which of the following substances are composed of heteroatomic molecules?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | an iron nail | b. | oxygen | c. | copper wire | d. | water |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13. A molecule represented by O-O-O must be classified as   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | homoatomic and polyatomic. | b. | homoatomic and monoatomic. | |  | c. | heteroatomic and polyatomic. | d. | heteroatomic and monoatomic. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 14. Which of the following terms correctly applies to a molecule of CO2?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | triatomic, heteroatomic | b. | polyatomic, diatomic | |  | c. | triatomic, homoatomic | d. | diatomic, heteroatomic |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 15. Table salt, NaCl is best classified as a(n) \_\_\_\_\_ .   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | compound | b. | element | |  | c. | homogeneous mixture | d. | heterogeneous mixture |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.5 - Classify matter as a compound, element, heterogenous mixture, or homogenous mixture. | | *KEYWORDS:* | Chemistry | |

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| 16. The limit of physical subdivision of pure H2O is \_\_\_\_\_ .   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | the atom | b. | the molecule | c. | the element | d. | a proton |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.2.2 - Explain Dalton's theory of the atom. | | *KEYWORDS:* | Chemistry | |

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| 17. Homoatomic pure substances are known as \_\_\_\_\_ .   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | protons | b. | elements | c. | compound | d. | molecules |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.5 - Classify matter as a compound, element, heterogenous mixture, or homogenous mixture. | | *KEYWORDS:* | Chemistry | |

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| 18. After heating, a pure substance, A, is found to produce both B and C. What can be said about the substance A?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | It is an element | b. | It is a compound | |  | c. | It is either an element or compound | d. | Impossible to predict |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.5 - Classify matter as a compound, element, heterogenous mixture, or homogenous mixture. | | *KEYWORDS:* | Chemistry | |

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| 19. Two pure substances A and B react to form a new pure substance C. From this, we may conclude that   |  |  |  | | --- | --- | --- | |  | a. | A and B are both elements | |  | b. | C is a compound, A and B may or may not be elements | |  | c. | C is an element, A and B are compounds | |  | d. | A, B, and C are all compounds |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.5 - Classify matter as a compound, element, heterogenous mixture, or homogenous mixture. | | *KEYWORDS:* | Chemistry | |

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| 20. Which of the following is an example of a homogeneous mixture?   |  |  |  | | --- | --- | --- | |  | a. | NaOH solution | |  | b. | mortar (mixture of water, sand and cement) | |  | c. | vinegar and oil salad dressing | |  | d. | more than one response is correct |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.3 - Differentiate between homogenous and heterogenous mixtures. | | *KEYWORDS:* | Chemistry | |

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| 21. Which of the following consists of a single chemical species?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | solution | b. | homogeneous mixture | |  | c. | heterogeneous mixture | d. | compound |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.5 - Classify matter as a compound, element, heterogenous mixture, or homogenous mixture. | | *KEYWORDS:* | Chemistry | |

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| 22. Early measurements of length were based on   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | dimensions of astronomical bodies. | b. | dimensions of the human body. | |  | c. | dimensions of bodies of water. | d. | distances between cities. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 23. The metric system is a measurement system that is   |  |  |  | | --- | --- | --- | |  | a. | the official system for all nations of the world. | |  | b. | only used by a few of the nations of the world. | |  | c. | commonly used by U.S. physical scientists. | |  | d. | used exclusively in chemical calculations. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.1 - Differentiate between metric and English units. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24. The basic unit of length in the metric system is the \_\_\_\_\_ .   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | mil | b. | millimeter | c. | foot | d. | meter |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 25. Which of the following is an SI unit?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | gram | b. | liter | c. | meter | d. | calorie |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26. The prefix centi- denotes what fraction of a basic unit?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 1/10 | b. | 1/100 | c. | 1/1000 | d. | 1000 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.2 - Identify appropriate metric prefixes. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27. Which of the following is a derived unit of the S.I. system?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | kilogram | b. | meter | c. | liter | d. | mole |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 28. Convert a temperature of 76°F to a Celsius value.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 10 | b. | 24 | c. | 44 | d. | 169 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.1 - Identify conversion factors. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29. Which of the following numbers is correctly expressed using scientific notation?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 3489 | b. | 5.248 × 104 | c. | 45.78 × 106 | d. | .0987 × 103 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.2 - Convert a number between standard and scientific notation. | | *KEYWORDS:* | Chemistry | |

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| 30. Do the following calculation and express the answer using correct scientific notation.  \_\_\_\_\_\_ = (2.97 × 102) × (6.09 × 10−7)   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 5.53 × 103 | b. | 1.81 × 10−4 | c. | 4.88 × 108 | d. | 2.05 × 10−9 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.3 - Perform math with numbers that are expressed in scientific notation. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31. Do the following calculation, and express the answer using correct scientific notation.  \_\_\_\_\_\_ = (6.00 × 1023) × (3.00) / (284)   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 6.34 × 1021 | b. | 1.58 × 10−22 | c. | 6.34 × 10−2 | d. | 15.8 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.3 - Perform math with numbers that are expressed in scientific notation. | | *KEYWORDS:* | Chemistry | |

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| 32. The number 0.00816 expressed correctly using scientific notation is \_\_\_\_\_ .   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 8.16 × 102 | b. | 8.16 × 103 | c. | 8.16 × 10−2 | d. | 8.16 × 10−3 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.2 - Convert a number between standard and scientific notation. | | *KEYWORDS:* | Chemistry | |

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| 33. How many significant figures are justified in a measurement of a length that is between 9 and 10 centimeters if the measuring device (ruler) has smallest divisions of 0.1 cm?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | one | b. | two | c. | three | d. | four |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.2 - Identify the number of significant digits in a numerical value. | | *KEYWORDS:* | Chemistry | |

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| 34. How many significant figures are used in expressing a measurement as 0.2503 L?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | one | b. | two | c. | three | d. | four |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.2 - Identify the number of significant digits in a numerical value. | | *KEYWORDS:* | Chemistry | |

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| 35. Which number has the greatest number of significant digits?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 1.0035 | b. | 17.5000 | c. | 0.0000625 | d. | 6.022 × 1023 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.2 - Identify the number of significant digits in a numerical value. | | *KEYWORDS:* | Chemistry | |

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| 36. Do the following calculation and express the answer using the correct number of significant figures.   \_\_\_\_\_\_ = (342) × (0.0012) ÷ 100.0   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 0.00410 | b. | 0.0041 | c. | 4.10 × 10−3 | d. | 0.004104 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.4 - Explain the rules for carrying significant figures through multiplication, division, and exponentiation operations. | | *KEYWORDS:* | Chemistry | |

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| 37. Do the following calculation. How many significant figures are justified for the answer?  \_\_\_\_\_\_= 6.02 + 5.119 + 0.04218   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | three | b. | four | c. | five | d. | seven |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.3 - Explain the rules for carrying significant figures through addition or subtraction operations. | | *KEYWORDS:* | Chemistry | |

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| 38. A furnace delivers 8.0 × 104 BTU per hour. How many kilocalories per hour is this? (hint: 1 cal = 0.00397 BTU)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 3.2 × 10−5 kcal | b. | 3.2 × 102 kcal | |  | c. | 2.0 × 104 kcal | d. | 2.5 × 102 kcal |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 39. Which of the following set-ups will allow you to calculate the cost of fruit in dollars per gram, if the price is given as 0.79 dollars per pound?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 40. A mass 0.0040 kg is equal to \_\_\_ cg.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 4.0 × 10-8 | b. | 400 | |  | c. | 0.40 | d. | 40 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.2 - Identify appropriate metric prefixes. GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 41. Suppose the speedometer in your car reads 55.0 mph. What is your speed in km/hr? (1 km = 0.621 mi.)   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 34.1 | b. | 0.029 | c. | 88.6 | d. | 0.011 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 42. Knowing that 1 g = 0.035 oz and 16 ounces = 1 lb, calculate the number of grams in 10 pounds.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 35 | b. | 0.56 | c. | 1.8 | d. | 4.6 × 103 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 43. If a student completes 5 problems out of a total of 8 on a pop quiz, what percentage of the quiz was completed?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 0.625 | b. | 6.25 | c. | 16.0 | d. | 62.5 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 44. If 13% of a class cheats on an exam and there are 93 students in the class, how many students should you recommend be expelled (to the nearest whole student)?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 9 | b. | 10 | c. | 12 | d. | 15 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 45. A hiker began a hike with a pint canteen full of water. One pint equals 16 fluid ounces. At the end of the hike, 7.0 fluid ounces of water remained. What percent of the water was *used* during the hike?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 78 | b. | 44 | c. | 56 | d. | 13 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 46. Eighteen students in a class will get this question correct. If that represents 45% of the class, how large is the class?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 20 | b. | 40 | c. | 60 | d. | 100 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 47. If urine has a density of 1.08 g/mL, what would be the mass of a 125 mL urine sample?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 135 g | b. | 0.00864 g | c. | 116 g | d. | 125 g |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 48. You are able to carry a maximum of 20 kg. What is the maximum volume of gold that you can carry?  (Au has a density of 19.6 g/cm3)   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 392 cm3 | b. | 1.0 × 103 cm3 | c. | 0.98 cm3 | d. | none of these |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 49. The fact that iron (Fe) corrodes when exposed to water and air is a   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | physical property. | b. | metal property. | |  | c. | chemical property. | d. | real property. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.3 - Differentiate between physical and chemical properties of matter. | | *KEYWORDS:* | Chemistry | |

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| 50. Convert 30.0°C to Fahrenheit.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 112 | b. | 86.0 | c. | 48.7 | d. | 34.4 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 51. Which of the following is not one of the five key body characteristics that provide a good assessment of a person's overall health?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | blood pressure | b. | blood cholesterol | |  | c. | body fat | d. | age |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 52. How can the volume of an irregular unknown object be measured?   |  |  |  | | --- | --- | --- | |  | a. | using a ruler to measure length, width, and depth | |  | b. | measuring the volume of water displaced by the object | |  | c. | obtaining the mass of the object | |  | d. | measure the radius and use V=πr2 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.3.1 - Calculate density given mass and volume. | | *KEYWORDS:* | Chemistry | |

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| 53. Do the following calculation and express the answer using the correct number of significant figures.  \_\_\_\_\_\_ =   (1.21 × 10−3 + 1.3 × 10−3) × 6.453 × 102   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 1.619 | b. | 2 | c. | 1.6 | d. | 1.62 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.4 - Explain the rules for carrying significant figures through multiplication, division, and exponentiation operations. | | *KEYWORDS:* | Chemistry | |

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| 54. If a sample of blood was found to have a density of 1.05 g/mL, what would be the mass of 1.000 liters of this material? Express your answer with the proper number of significant figures.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 1.05 × 10−3 g | b. | 1.05 × 103 g | c. | 1050 g | d. | 1.050 kg |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.2 - Convert a number between standard and scientific notation. GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 55. On a cold winter day the weather report gives the temperature as -5.0° F.  What would this temperature be if reported on the Kevin scale?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 252 K | b. | 258 K | c. | 268 K | d. | -20.6 K |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 56. Express the following “generic” number in standard notation.    X.XX × 104   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 0.000XXX | b. | XX,X00 | c. | X,XX0 | d. | 0.00XXX |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.2 - Convert a number between standard and scientific notation. | | *KEYWORDS:* | Chemistry | |

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| 57. Express the following “generic number” in scientific notation.  0.0000XXX   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | XXX × 10-7 | b. | X.XX × 105 | c. | X.XX × 10-5 | d. | X.XX × 10-4 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.2.2 - Convert a number between standard and scientific notation. | | *KEYWORDS:* | Chemistry | |

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| 58. The density of zinc is 7.13 g/cm3.  What is the mass in kilograms of a 125 cm3 cylinder of zinc?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 891 kg | b. | 17.5 kg | c. | 0.0175 kg | d. | 0.891 kg |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 59. Ethanol (ethyl alcohol) has a density of 0.789 g/mL at 25°C.   If 75.5 g of ethanol is needed for a reaction, what volume in mL should be added to the reaction container?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 95.7 mL | b. | 59.6 mL | c. | 0.0105 mL | d. | 78.9 mL |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 60. Based on data obtained in an experiment, to determine the density of a metal, the following calculation is carried out.  Express the answer to the correct number of significant figures.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 2.1 g/mL | b. | 2.14 g/ml | c. | 2.142 g/mL | d. | 2.1423 g/mL |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.3.4 - Explain the rules for carrying significant figures through multiplication, division, and exponentiation operations. | | *KEYWORDS:* | Chemistry | |

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| 61. You are saving for a new $1226 (including taxes) laptop computer using earnings from your part-time job.  At that job, you work 20 hours/week, earning $10.25/hour take home pay.  If you can save 25% of all of your income, how many weeks will it take for you to save enough money?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 48 weeks | b. | 24 weeks | c. | 12 weeks | d. | 6 weeks |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 62. It turns out that the dark side of the moon has as a mean temperature of -280 oF.  What would that the temperature be on the Kelvin scale?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | -553 K | b. | -7 K | c. | 100 K | d. | 173 K |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 63. The figure shown below is an example of what type of molecule?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | homoatomic, triatomic | b. | heteroatomic, polyatomic | |  | c. | homoatomic, polyatomic | d. | heteroatomic, triatomic |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 64. Which of the following properties is characteristic of a mixture?   |  |  |  | | --- | --- | --- | |  | a. | constant composition | |  | b. | variation of physical properties | |  | c. | fixed melting point. | |  | d. | cannot be physically separated into simpler materials |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.3 - Differentiate between homogenous and heterogenous mixtures. | | *KEYWORDS:* | Chemistry | |

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| 65. The average gestation period (length of a pregnancy) for humans is 40 weeks.  If a child if born after just 36 weeks, what was the percentage of this gestation period compared to the normal length?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 4.0 % | b. | 10 % | c. | 28 % | d. | 90 % |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 66. One system of rating food is to determine its energy density in kcal/g.  If your 200 g snack contains 100 g fat (900 cal/g) and  a total of 100 g of protein and carbohydrates (400 cal/gram).  What is its energy density?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | a. | 1.3 kcal/g | b. | 6.5 kcal/g | c. | 9.0 kcal/g | d. | 13 kcal/g |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 67. The number twelve, representing a dozen, has two significant figures.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.3.2 - Identify the number of significant digits in a numerical value. | | *KEYWORDS:* | Chemistry | |

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| 68. The number 6730.0 contains five significant figures.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.3.2 - Identify the number of significant digits in a numerical value. | | *KEYWORDS:* | Chemistry | |

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| 69. If 3333 is divided by 5.0, the answer should have two significant figures.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.3.4 - Explain the rules for carrying significant figures through multiplication, division, and exponentiation operations. | | *KEYWORDS:* | Chemistry | |

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| 70. If 6526 is added to 15.0, the answer should have two significant figures.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.3.3 - Explain the rules for carrying significant figures through addition or subtraction operations. | | *KEYWORDS:* | Chemistry | |

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| 71. To convert feet to inches, you should multiply by the factor 12 in./ft.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.5.1 - Identify conversion factors. | | *KEYWORDS:* | Chemistry | |

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| 72. To convert micrograms to grams, you should multiply by 1,000,000 g/microgram.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.4.2 - Identify appropriate metric prefixes. | | *KEYWORDS:* | Chemistry | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 73. To convert microliters to liters, you should multiply by 1 liter/1,000,000 microliters.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.4.2 - Identify appropriate metric prefixes. | | *KEYWORDS:* | Chemistry | |

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| 74. If a 50 gram sample of iron alloy contains 40 grams if iron, it contains 80% iron by weight.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 75. If 100 people in a town of 5,000 people own a certain color car, this represents 0.1% of the population.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 76. If a 200 gram sample of water is partially frozen forming 40 g of ice, than 80% of the original sample is still a liquid.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.5.2 - Solve one-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 77. A sample of urine is measured to have the density of 1.15 g/mL which is an indicator that there may be a medical problem.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO2.3.1 - Calculate density given mass and volume. | | *KEYWORDS:* | Chemistry | |

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| 78. A patient weights 220 lbs. A medication for this patient is supposed to be taken 3 mg per kg per day. The correct dose for this patient is 3000 mg per day.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.5.3 - Solve multi-step dimensional analysis problems. | | *KEYWORDS:* | Chemistry | |

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| 79. A particular medication is a heterogeneous mixture. Since heterogeneous mixtures are consistent throughout, this medication does not need to be shaken.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO3.1.3 - Differentiate between homogenous and heterogenous mixtures. | | *KEYWORDS:* | Chemistry | |

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| 80. A Celsius degree is the same size as a Kelvin degree.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 81. One advantage of the Kelvin system is that it is impossible to have temperatures below zero.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 82. Body density can be used to determine the amount of fat carried by an individual because the density of muscle is greater than that of fat.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO2.3.1 - Calculate density given mass and volume. | | *KEYWORDS:* | Chemistry | |

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| 83. A scientific model is an explanation for observed behavior.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.1.2 - Outline the steps of the scientific method. | | *KEYWORDS:* | Chemistry | |

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| 84. Molarity (*M*) is calculated as:  *.  M* would be considered a derived unit.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.5.1 - Identify conversion factors. | | *KEYWORDS:* | Chemistry | |

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| 85. A monoatomic molecule cannot be reduced to a simpler chemical.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 86. The yard is considered a derived SI unit.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 87. A patient with a body temperature of 300 K would be considered as suffering from hypothermia.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 88. Identify a true statement of matter.   |  |  |  | | --- | --- | --- | |  | a. | Matter is a measurement of gravitational force acting on an object. | |  | b. | Matter is anything that has mass and occupies space. | |  | c. | The amount of matter in an object varies in different locations. | |  | d. | Matter is a measurement of mass in an object. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO2.1.2 - Define Matter. | | *KEYWORDS:* | Chemistry | |

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| 89. Which of the following units of measure is a derived unit of measurement?   |  |  |  | | --- | --- | --- | |  | a. | Length | |  | b. | Area | |  | c. | Mass | |  | d. | Time |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO1.4.3 - Identify standard units of measurement for length, volume, mass, time, and temperature. | | *KEYWORDS:* | Chemistry | |

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| 90. Molecules that contain two or more kinds of atoms are \_\_.   |  |  |  | | --- | --- | --- | |  | a. | Diatomic molecules | |  | b. | Homoatomic molecules | |  | c. | Heteroatomic molecule | |  | d. | Triatomic molecules | |  | e. | Polyatomic molecules |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 91. Molecules that contain more than three atoms are \_\_.   |  |  |  | | --- | --- | --- | |  | a. | Diatomic molecules | |  | b. | Homoatomic molecules | |  | c. | Heteroatomic molecule | |  | d. | Triatomic molecules | |  | e. | Polyatomic molecules |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 92. Molecules that contain two atoms are \_\_.   |  |  |  | | --- | --- | --- | |  | a. | Diatomic molecules | |  | b. | Homoatomic molecules | |  | c. | Heteroatomic molecule | |  | d. | Triatomic molecules | |  | e. | Polyatomic molecules |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 93. Molecules that contain three atoms are \_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | Diatomic molecules | |  | b. | Homoatomic molecules | |  | c. | Heteroatomic molecule | |  | d. | Triatomic molecules | |  | e. | Polyatomic molecules |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |

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| 94. Molecules that contain only one kind of atom are \_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | Diatomic molecules | |  | b. | Homoatomic molecules | |  | c. | Heteroatomic molecule | |  | d. | Triatomic molecules | |  | e. | Polyatomic molecules |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *LEARNING OBJECTIVES:* | GOBC LO3.1.2 - Differentiate between compounds, molecules, and elements. | | *KEYWORDS:* | Chemistry | |