

CHE/PHY 125
SPRING 01
TEST 1

- T F 1. The property of mass is a measure of how much matter is in an object.
- T F 2. A 200 g piece of iron has twice the volume as a 50 g piece of iron.
- T F 3. The independent variable is usually placed on the ordinate (y- axis).
- T F 4. A theory is a hypothesis that has been shown to be correct by many experiments.
- T F 5. An element is a pure substance that cannot be broken down into anything simpler by physical or chemical means.
- T F 6. The smallest particle with the properties of a pure substance is called an atom.
- T F 7. Protons are so much more massive than electrons that you can neglect the mass of electrons when determining the mass of an atom.
- T F 8. A compound is a pure substance that can be separated into simpler substance by physical means.
9. Which of the following is not a SI unit of the property it measures?
- A. Length - foot
 - B. Volume - liter
 - C. Time - second
 - D. Mass - kilogram
10. The English unit closest in size to a meter is
- A. Yard
 - B. Inch
 - C. Foot
11. The property of volume is a measure of _____.
- A. how much matter the object contains
 - B. the compactness of matter in a given space
 - C. the extent of the surface of the object
 - D. how much space the object occupies
12. The vertical axis on a standard Cartesian (rectangular) graph is called the _____.
- A. ordinate
 - B. x axis
 - C. abscissa
 - D. y axis
13. Which of the following are the same?
- A. 1 liter and 1000 cl
 - B. 1 ml and 1 cm³
 - C. 1 cl and 1 cc
 - D. 1000 seconds and 1 hectosecond
14. Which of the following is equal to 12345 mm?
- A. .12345 km
 - B. 1.2345 m
 - C. 1.2345 dam
 - D. 12.345 cm

15. The prefix kilo means _____.
- A. .1
 - B. 10
 - C. 100
 - D. 1000
16. The width of an adult finger nail is closest to a _____.
- A. decimeter
 - B. meter
 - C. centimeter
 - D. deciliter
17. How many dekameters are in a kilometer?
- A. 10000
 - B. .0001
 - C. 100
 - D. NOTA
18. If you had a clock that you could only read to the nearest second, what is the least number of seconds that you should measure to produce an error no less than 10%?
- A. 100
 - B. 10
 - C. 1000
 - D. 1
19. What is the minimum mass that should be measured using the balance that we constructed in class?
- A. 200 g
 - B. 2 g
 - C. 20 g
 - D. It doesn't matter how much mass you use.
20. A tentative explanation of a scientific problem is called a(n):
- A. Experiment
 - B. Hypothesis
 - C. Theory
 - D. Law
 - E. Model
21. A non-Newtonian fluid can be made by water and:
- A. M&M's
 - B. Oil
 - C. Food coloring
 - D. Cornmeal
 - E. Cornstarch
22. In the crushing can experiment, the phase change of water was _____ when the can was crushed.
- A. Liquid to gas
 - B. Gas to solid
 - C. Gas to liquid
 - D. Liquid to solid

23. In the candle exercise, what science process skill was used primarily?
- A. Predicting.
 - B. Controlling variables
 - C. Experimenting
 - D. Observing
24. In the cornstarch putty exercise, what science process skill was not used?
- A. Observing
 - B. Classifying
 - C. Communicating
 - D. Making hypotheses
25. In the paper towel experiment (quicker picker upper), what science process skill was not used?
- A. Measuring
 - B. Observing
 - C. Making models
26. When you measure the length of a table you find that it is 1 m plus 1 cm plus 1 mm long. What is its length in hm?
- A. .01011 hm
 - B. 1.11 m
 - C. 1011 hm
 - D. 1.11 hm
27. For the data below, what is the relation between y and x?
- | | |
|---|----|
| x | y |
| 0 | 4 |
| 1 | 9 |
| 2 | 14 |
| 3 | 19 |
| 4 | 24 |
- A. Add 4 to x then multiply the result by 5.
 - B. Multiply x by 5 then add 4 to the result.
 - C. Add 5 to x.
 - D. There is no pattern to the relationship between y and x.
28. For the data in question 27, what is the equation which represents the relationship between y and x?
- A. $y = (4+x) \times 5$
 - B. $y = 5x + 4$
 - C. $y = x + 5$
 - D. There is no equation for the relationship between y and x.