Test
Measurement & Nanotechnology
Grades 6 - 12

Answer the following True or False:  **Circle One**

1. A liter contains 1,000 smaller units called milliliters.
   True or False

2. A liter has a volume of 1,000 cubic centimeters.
   True or False

3. If we convert 6,543,219 meters, to kilometers we get 6,543,219 km.
   True or False

4. Nanoscience is the study and development of materials and structures in the range of 1 nm (10^{-9} m) to 100 nanometers (100 x 10^{-9} m = 10^7 x 10^{-9} = 10^{-2} x 10^{-9} = 10^{-7}) and the unique properties that arise at that scale.
   True or False

5. An angstrom X is within the nanoscale but not the subatomic scale.
   True or False

End of True/False

Answer the following Multiple Choice Questions:
**Circle One** answer for each question.

6. A vitamin C tablet has a mass of 500 mg. That is the same as ______.
   (a) 5 g     (b) 0.05 g     (c) 0.5 g     (d) 0.5 kg     (e)

7. The length of a pencil would probably best be measured in ______.
   (a) milligrams     (b) meters     (c) decameters
   (d) centimeters     (e) micrometers

8. The unit of volume that is the same as one cubic decimeter is the ______.
   (a) meter     (b) liter     (c) gram
   (d) hectometer     (e) none of these

9. Determine the order of magnitude difference in the sizes of the radii for Atoms (10^{-10} meter) compared with neutrons (10^{-15} meter).
   (a) Order 4     (b) Order 2     (c) order 12
   (d) Order 6     (e) none of these

10. How long has it been legal to use the metric system in the U.S.?
    (a) 1958.
    (b) 1975
    (c) 1866
    (d) 1921.
    (e) None of these.
    The end

Answers: 1. T   2. T   3. F   4. T   5. F   6. (c) 7. (d) 8. (b) 9. (e) 10 (c)