

QUIZ – SI UNITS, SIGNIFICANT DIGIT, AND SCIENTIFIC NOTATION

PART A MULTIPLE CHOICE - CIRCLE THE CORRECT ANSWER (1/2 POINT EACH)

1. What SI unit is used to measure length?
a. meter b. yard c. ampere d. kelvin e. volt
2. What SI unit is used to measure electricity?
a. meter b. yard **c. ampere** d. kelvin e. volt
3. What is the prefix for one billionth?
a. mega b. micro c. tera **d. nano** e. pico
4. How many grams are in a kilogram?
a. 100 **b. 1000** c. 10000 d. 1/100 e. 1/1000
5. How many significant digits are in 546.0?
a. 1 b. 2 c. 3 **d. 4** e. 5
6. How many significant digits are in 0.0009?
a. 1 b. 2 c. 3 d. 4 e. 5
7. What is the correct answer to $(4.5\text{m} + 4.009\text{m})/2.0$?
a. 4 b. 4.2 **c. 4.3** d. 4.255 e. 4.2545
8. What is the correct expression in scientific notation for 4,500,000?
a. 4×10^6 b. 45×10^5 c. 450×10^4 d. 5×10^6 **e. 4.5×10^6**

PART B APPLICATION - SHOW ALL WORK (3 POINTS EACH)

9. If an object measures 450. cm by 15.0 cm by 12.5 cm, what is its volume?

$$450. \text{ cm } (15.0 \text{ cm})(12.5\text{cm}) = 84375 \text{ cm}^3 = 84,400\text{cm}^3$$

10. If an experiment takes 3.5 days to complete, how many seconds passed?
(Give the answer in scientific notation)

$$3.5 \text{ days}(24\text{hours}/1\text{day})(60\text{minutes}/1\text{hour})(60\text{seconds}/1\text{minute}) = 302,400\text{seconds} = 3.0 \times 10^5 \text{ s}$$