Worksheet Two

Physical Quantities and Scientific Methods of Measurement

I. Answer the following questions

1. Which of the following is not a physical quantity ?

   a) Time b) Taste c) color d) b and c

2. How many base/fundamental physical quantities are there?

   a) 5 b) 7 c) 9 d) 6

3. Which of the following is not true about fundamental physical quantities?

   a) Cannot be expressed in terms of any other quantity.

   b) They are the bases for other quantities.

   c) They can be derived from other quantities

   d) They are unique

4. Which of the following are not a fundamental physical quantity? Select all possible answers

Time	weight	Gravity
Mass	temperature,	electric current,

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luminous intensity	amount of a substance.	Resistance
Velocity	Area	Volume
Density	Speed	

5. Select the correct SI Unit for the following fundamental quantities

   Length…….

   Time……

   Temperature…….

   Mass……

6. Which of the following are derived physical quantities?

   a) Weight c) electric current

   b) Velocity d) a and b

7. Match the following quantities with their symbols of SI Unit

   A. Area ……. M

   B. Speed …….. Kg

   C. Volume ……M^2

   D. Density …… Kg/m^3

   E. Time …… K(Kelvin)

   F. Length …….m/s

   G. Mass ……. S

   H. Temperature …….. M^3

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Prefixes and Conversion of Base Units

II. Choose the correct answer for the following questions

1. A short hand form of writing very large and very small numbers is known as…….

   a) a prefix. B) SI c) Scientific notation

2. In " ***Centi***meter, ***Kilo***gram, ***Mili***second" , what do the underlined letters refer to ?

   a) a prefix. b) SI c) Scientific notation

3. The base unit for the length in metric system is

   A. cm B. m C. in. D. yd

4. Express 0.000840 in scientific notation

   A. 8.40×10^{-3} B. 8.40×10^{4}

   C. 8.40×10^{-4} D. 8.4×10^{4}

5. In metric system the prefix nano- means

   A. 10^{-9} B. 10^{9} C. 10^{12} D. 10^{-12}

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6. What is the SI base unit of Volume ?

   a. Gram b. liter c. meter d. kilogram

7. When measuring the length of a paperclip, you would use what SI units?

   a. Kilometer b. millimeter c. meter d. gram

8. The prefix "giga" means: _____

   a. 1×10^{9} b. 1×10^{-9} c. 1×10^{6} d. 1×10^{-6}

9. The prefix "mega" means: _____

   a. 1×10^{6} b. $a \times 10^{-6}$ c. 1×10^{3} d. 1×10^{9}

10. The prefix "milli" means: _____

    a. 1×10^{2} b. 1×10^{-2} c. 1×10^{3} d. 1×10^{-3}

III. Match the decimal representation with the correct prefix; Put the correct number in the space provided

"A"	**"B"**
1. Mega (M)	……. 0.01
2. Kilo (K)	…….. 10^{-6}
3. Centi (c)	……. 10^{-3}
4. Milli (m)	……. 10^{9}
5. Micro (μ)	……. 10^{6}
6. Giga (G)	…….. 10^{3}

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