

**SEMESTER-ONE****PHYSICS**

Class X

Student Name: .....

Date: .....

**Period-I : Topic 1****INTRODUCTION TO PHYSICS AND PROPERTIES OF MATTER****Multiple Choice Questions**

Select and write one most appropriate option out of the four options given for each of the questions 1 – 5.

- Which of the following is a derived quantity?  
(a) Mass (b) Energy  
(c) Temperature (d) Amount of substance
- The SI unit of luminous intensity is  
(a) Candela (b) Mole  
(c) Light year (d) None of these
- A screw gauge can measure length accurately upto  
(a) 0.1 mm or 0.05 mm (b) 1 mm  
(c) 0.01 mm or 0.005 mm (d) 1 cm
- In scientific notation 0.00453 can be written as:  
(a)  $4.53 \times 10^{-3}$  (b)  $45.3 \times 10^{-4}$   
(c)  $0.453 \times 10^{-3}$  (d)  $453 \times 10^{-4}$
- The sum of the numbers 336.32, 127.4 and 0.201 in appropriate significant figures is  
(a) 663.821 (b) 664  
(c) 663.8 (d) None of these

## Fill in the Blanks

Fill in the blanks with a suitable word for each of the questions 1 – 5.

1. \_\_\_\_\_ is the degree to which the result of a measurement, calculation, or specification conforms to the correct value or a standard.
2. The mass per unit volume of the substance is \_\_\_\_\_ .
3. \_\_\_\_\_ are defined in terms of other physical quantities.
4. The uncertainty in the measurement of a physical quantity is called \_\_\_\_\_ .
5. \_\_\_\_\_ is the product of mass and acceleration.

## True or False

State whether the following statements are true or false for each of the questions 1–5.

1. Physics is the subject of studying nature and natural phenomena.
2. Faraday discovered electromagnetic induction accidentally when he threw a magnet into a coil.
3. Mechanics is a branch of physics which deals study of space.
4. The ratio of the density of a substance to the density of water  $4^{\circ}\text{C}$  is its relative density.
5. Luminous intensity is a fundamental quantity.

## Theoretical and Numerical Type Questions

Answer each of the questions 1 – 5.

1. The diameter of a cell is 0.000023 metres. Write it in scientific notation form.

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2. Find the area of a triangle of height 30.5 cm and base 60.8 cm.

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3. Find the volume of a cuboid having 4.5 m length, 250 cm width and 3.5 m height.

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4. Which will exert more pressure, 250 kg mass on  $10 \text{ m}^3$  or 70 kg mass on  $4 \text{ m}^2$ ? Given reason.

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5. Will the dimensions of a Physical quantity be the same, whatever be the units in which it is measured? Why.

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