





## Loreto Convent Intermediate College

Lucknow

## Holiday Homework

## <u>Class- XI</u> Subject- Physics

- The average distance of the sun from earth is 1.496 x 10<sup>11</sup> m. Express it in light year (ly) and parsec (pc).
- 2. A body has a uniform acceleration of 45 km/min<sup>2</sup>. Find its value in the SI system.
- 3. The length, breadth and thickness of a metal sheet are 4.234 m, 1.005 m and 2.01 cm respectively. Calculate the area and the volume of the sheet to correct significant figures.
- 4. A student made several observations for the period of oscillation in an experiment of a simple pendulum. His readings turned out to be 2.63 s, 2.56 s, 2.42 s, 2.71 s and 2.80 s. Find (i) mean period of oscillation, (ii) absolute error in each reading, (iii) mean absolute error, (iv) fractional error and (v) percentage error.
- 5. The diameter of a circle is 2.486 m. Calculate the area enclosed by the circle to appropriate significant figures ( $\pi$  = 3.1416)
- 6. Find the units and dimensions of the constants *a* and *b* in the relation  $P = (b x^2) / at$ , where P is power, x is distance and t is time.
- 7. Assuming that the mass *m* of the largest stone that can be moved by a flowing river depends upon the velocity of water, its density and acceleration due to gravity. Obtain the formula for the mass of the stone by dimensional analysis.

