



Loreto Convent Intermediate College

Lucknow

Holiday Homework

Class- IX

Subject- Physics

1. The distance of a galaxy from the earth is 5.6×10^{25} m. Assuming the speed of light to be 3×10^8 $m s^{-1}$, find the time taken by light to travel this distance?
2. The wavelength of light of a particular colour is 4580 angstroms. Express it in (a) nanometre and (b) metre.
3. Mass of a nitrogen molecule is 14.0 u. Find its value in grams.
4. Size of a particle is 4 nm. Find its value in metres.
5. Compare the time periods of a simple pendulum at places where g is $2.25 m s^{-2}$ and $1.44 m s^{-2}$ respectively.
6. A pendulum completes 10 oscillations in 15 s. (a) What is its time period?
(b) If $g = 9.8 m s^{-2}$, find its length.
7. A simple pendulum is taken to a mountain so that acceleration due to gravity falls to $1/16$. Find its new time period.

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