

# ATOMIC ENERGY EDUCATION SOCIETY

e-Learning Content(Science)

Class –VII

Chapter – 13

## **Motion and time**

### **Module 2 of 3**

#### **7. Discovery of time period**

- It is said that once Galileo Galilei was sitting in a church and noticed that a lamp suspended from the ceiling with a chain was moving from one side to other. He was surprised to find that his pulse beat the same number of times during the interval in which the lamp completed one oscillation.
- Later he experimented with various pendulum and found that a pendulum of a given length takes always same time to complete one oscillation. This led to the discovery of pendulum clocks.

#### **8. Smaller units of time**

- The smallest time interval that can be measured with clock is one second.
- Some clocks can measure time interval smaller than a second.
- Some clocks can measure time intervals as small as one millionth or even one billionth of a second
- Microsecond: one millionth of a second
- Nanosecond: one billionth of a second
- These clocks are used for scientific researches.
- In sports we use clocks which can measure one tenth or one hundredth of a second.

- On the other hand time of historic events are stated in terms of centuries and millenniums.
- Century: Time period of 100 years.
- Millennium: Time period of 1000 years.
- The age of stars and planets are often expressed in billion of years.

## **9. Speedometer and odometer**

- Speedometer: Speedometer is a device or meter present on the dashboards of the vehicles which displays the speed of the moving vehicle.
- Odometer: Odometer is a device on the dashboard of the vehicle which gives the measure of the distance covered by the vehicle.
- Rockets, launching launching satellites into the orbit of Earth often attains the speed upto 8 Km/s.
- Some animals like tortoise and snail are very slow. A tortoise can cover only 8cm in one second

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