

Devices for measuring time

We use (1) Pendulum watch to find the time in our daily life. Fig. 2.12 shows a pendulum clock. In it, time is measured by making use of the time taken by the pendulum to complete one oscillation. The pendulum completes one to and fro oscillation in 2 s i.e. it moves from one extreme to the other extreme in 1 s and then returns to the other extreme in next 1 s. The circular dial has 12 markings divided in four quadrants. Each marking is further divided in five small divisions, so there are in all 60 small divisions. There are three needles joined to the axle of the gear wheels at the centre of the dial. These needles are named as second's arm, minute's arm and hour's arm. The second's arm moves by one small division in the time interval when the pendulum moves from one extreme to the other extreme (i.e. in 1 s). The minute's arm moves by a small division when the second's arm completes one round (i.e. in 60 s) and the hour's arm moves by one small division when the minute's arm completes one round (i.e. in 1 h).

Ch-2

Date _____
Page _____

Q Define mass. What is the SI unit of mass?

A) The mass of a body is the quantity of matter contained in it. The SI unit of mass is Kilogram.

Q Define time. Define one second.

A) The interval between two ~~instant~~ instances or events is called time. One second is the time interval between two consecutive ticks that we hear from a pendulum wall clock.