## Exercise Questions

1. Give two examples each, of modes of transport used on land, water and air.

## Solution:

Land - Train, Bus
Water - Ship, Boat
Air - Helicopter, Aeroplane
2. Fill in the blanks:
(i) One metre is $\qquad$ cm.
(ii) Five kilometre is $\qquad$ m.
(iii) Motion of a child on a swing is $\qquad$ .
(iv) Motion of the needle of a sewing machine is $\qquad$ .
(v) Motion of wheel of a bicycle is $\qquad$ .

## Solution:

(i) One metre is $\mathbf{1 0 0} \mathrm{cm}$.
(ii) Five kilometres is $\mathbf{5 0 0 0} \mathrm{m}$.
(iii) Motion of a child on a swing is periodic.
(iv) Motion of the needle of a sewing machine is periodic.
(v) Motion of the wheel of a bicycle is circular.
3. Why can a pace or a footstep not be used as a standard unit of length?

## Solution:

Pace or a footstep cannot be used as a standard unit of length because it varies from person to person.
4. Arrange the following lengths in their increasing magnitude: 1 metre, 1 centimetre, 1 kilometre, 1 millimetre.

## Solution:

1 millimetre, 1 centimetre, 1 metre, 1 kilometre
5. The height of a person is 1.65 m . Express it into cm and mm .

## Solution:

$1.65=165 \mathrm{~cm}=1650 \mathrm{~mm}$
6. The distance between Radha's home and her school is 3250 m . Express this distance in km .

## Solution:

$1 \mathrm{~km}=1000 \mathrm{~m}$
Hence, $3250 \mathrm{~m}=3.25 \mathrm{kms}$
7. While measuring the length of a knitting needle, the reading of the scale at one end is 3.0 cm and at the other end is 33.1 cm . What is the length of the needle?

## Solution:

Length of needle $=33.1-3=30.1 \mathrm{~cm}$
8. Write the similarities and differences between the motion of a bicycle and a ceiling fan that has been switched on.

## Solution:

Similarities - The blades of a fan and the wheels of a bicycle show circular motion
Differences - Bicycles move in rectilinear motion, but the fan does not move in rectilinear motion.
9. Why would you not like to use a measuring tape made of an elastic material like rubber to measure distance? What would be some of the problems you would meet in telling someone about a distance you measured with such a tape?

## Solution:

An elastic measuring-tape will not give accurate measurements as it stretches in length and reduces in size when stretched. When we express measurements taken with elastic tape, we have to tell whether the tape was stretched. If yes, how much? Hence, it is very difficult to tell the measurement taken from an elastic tape.
10. Give two examples of periodic motion.

## Solution:

a) A needle of a sewing machine
b) Pendulum

