CBSE NCERT Solutions for Class 6 science Chapter 10

Exercises

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

Solution: Different modes of transports are used to go from one place to another. There are three modes of transport used in our life. These are examples of modes of transport:

Land transport: Bus, motorbike.

Water transport: Boat, ship. Air Transport: Aeroplane, Helicopter.

Q.2. Give two examples of periodic motion.

Solution: A motion which repeats itself regularly after a fixed interval of time is called periodic motion. The few examples of periodic motion are listed below:

- The motion of a pendulum:
  The bob of a pendulum repeats its motion regularly after fixed intervals of time. This motion is called periodic motion.

- The motion of a boy sitting on a swing:
  The motion of a swing repeats itself after regular intervals of time. Hence, a boy sitting on a swing has periodic motion.

Q.3. One metre is _____ cm.
100

Solution: One meter is 100 cm. The SI unit of distance is metre according to the International System of Units. The SI based units are the standard units of measurement defined by the International System of Units (SI).

Q.4. Five kilometre is _____ m.
5000

Solution: Five kilometres is 5000 m. SI unit for measurement of length is metre.

Q.5. Motion of a child on a swing is _____.
Periodic motion

Solution: The motion of a child on a swing is periodic motion. It is the motion of an object that repeats after some time.

Q.6. Motion of the needle of a sewing machine is _____ motion.
Periodic

Solution: The motion of the needle of a sewing machine is periodic motion. It is the type of motion that repeats itself after a fixed time.

Q.7. The Motion of the wheel of a bicycle is _____ (Oscillatory/Rotational) motion.
Rotational motion

Solution: The motion of the wheel of a bicycle is rotational motion. An object is said to be in this kind of motion when it moves on its own axis or around a fixed centre.

Q.8. Why can a pace or a footstep not be used as a standard unit of length?

Solution: A pace or a footstep not be used as a standard unit of length because the size of pace and footstep can vary from person to person. This will lead to confusion while measuring the lengths by different persons. Hence, we should use a common unit or standard units like the International System of Units (SI Units).

Q.9.   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.

Q.10.   The height of a person is 1.65 m. Express it into cm and mm.

Solution: Given data,

           Height of a person in metre = 1.65 m

           We know that, 1 m = 100 cm Therefore, height in cm = 1.65 × 100 = 165 cm

           Similarly, 1 m = 1000 mm

           Therefore, the height in mm = 1.65 × 1000 = 1650 mm

Q.11.   The distance between Radha home and her school is 3250 m. Express this distance into km.

Solution: We know that

           1 km = l000 m,so 1 m = 11000 km

           Therefore, 3250 m = 3250×11000 km = 3.25 km

Q.12.   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: Given data,

           The initial reading of measurement = 3.0 cm

           The final reading of measurement = 33.1 cm The length of the needle = 33.1 cm - 3.0 cm = 30.1 cm

Q.13.   Write the similarities and differences between the motion of a bicycle and a ceiling fan that has been switched on.

Solution: Similarity: Bicycle and a ceiling fan show a circular motion.

           Difference: Along with the circular motion, a bicycle shows a rectilinear motion, whereas a ceiling fan has only circular motion.

Q.14.   Why would you not like to use a measuring tape made of an elastic material like rubber to measure distance? What would be some problems you would meet in telling someone about a distance you measured with such a tape?

Solution: Since the tape is stretchable, it might show the same measurements for different lengths if the tape is stretched even for a small amount.

           If we measure a certain distance, twice using an elastic tape, we might get different values of length each time for the same distance. This is because elastic tapes are stretchable and length will differ. Therefore, we cannot use it as measuring tape. It leads to incorrect measurements.