

## Chapter 10. Motion And Measurement Of Distances

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### Very Short Q&A:

**Q1:** Give two examples of mode of transport used on land.

**Ans:** Car and train.

**Q2:** What do you mean by term 'measurement'?

**Ans:** The comparison of an unknown quantity with some known quantity is called measurement.

**Q3:** The known fixed quantity of measurement is called \_\_\_\_\_.

**Ans:** Unit

**Q4:** What is the full form of SI units?

**Ans:** International system of units

**Q5:** Give two example of each mode of transport used on water and air.

**Ans:** Ship and boat are the examples of mode of transport used on water. Spacecraft and aeroplane are mode of transport used on air.

**Q6:** What is SI unit of length?

**Ans:** Metre

**Q7:** The result of any measurement is expressed in two parts. One part is number and other part is \_\_\_\_\_.

**Ans:** Unit

**Q8:** In ancient India small length measurement used were angul and mutthi.(TRUE/FALSE)

**Ans:** True

**Q9:** The system of unit of measurement used now days is \_\_\_\_\_.

**Ans:** International system of units(SI Units)

**Q10:** What is motion?

**Ans:** Change in position of an object with time is known as motion.

**Q11:** 1 metre is equal to \_\_\_cm.

**Ans:** 100

**Q12:** We can measure length of a curved line directly by using a metre scale.(TRUE/FALSE)

**Ans:** False

**Q13:** What are different types of motion?

**Ans:** Rectilinear motion, circular motion and periodic motion.

**Q14:** When objects move along a straight line such motion is called \_\_\_\_\_ motion.

**Ans:** Rectilinear motion.

**Q15:** One centimetre is equal to \_\_\_\_\_millimetre.

**Ans:** 10

**Q16:** When an object moves in a circular path, such motion is called \_\_\_\_\_.

**Ans:** Circular motion

**Q17:** Give one example of periodic motion.

**Ans:** Motion of a pendulum is a periodic motion.

**Q18:** One kilometre is equal to \_\_\_\_\_ metre.

**Ans:** 1000

**Q19:** We can use \_\_\_\_\_ to measure length of a curved line.

**Ans:** Thread

**Q20:** A sprinter in 100m race move along a straight track. This type of motion is called \_\_\_\_\_.

**Ans:** Rectilinear motion

**Q21:** Give an example of circular motion.

**Ans:** Motion of a point marked on the blade of an electric fan is a circular motion.

**Q22:** Strings of guitar being played are in \_\_\_\_\_ motion.

**Ans:** Periodic

**Q23:** In periodic motion, object repeats its motion. (TRUE/FALSE)

**Ans:** True

**Q24:** Hands of clock are example of \_\_\_\_\_ motion.

**Ans:** Circular

**Q25:** What is periodic motion?

**Ans:** An object repeats its motion after some time; this type of motion is called periodic motion.

**Q26:** 8 km is equal to \_\_\_\_m.

**Ans:** 8000

**Q27:** The length of a rope is 5m. Express it in cm.

**Ans:** 5 m = 500 cm

**Q28:** If a child is moving on swing, its motion is \_\_\_\_\_.

**Ans:** Periodic motion

**Q29:** 10 centimetres is equal to \_\_\_\_\_mm.

**Ans:** 100

**Q30:** A ball is rolling on the ground, rotating as well as moving forward on the ground. Therefore it undergoes \_\_\_\_\_ and \_\_\_\_\_ motion.

**Ans:** Rectilinear and rotational

**Q31:** If the person is walking along a straight road, its motion is \_\_\_\_\_.

**Ans:** Rectilinear motion

**Q32:** Motion of falling stone is \_\_\_\_\_.

**Ans:** Rectilinear motion

**Q33:** How many millimetres are there in 20 centimetres?

**Ans:** 200 mm

**Q34:** Rekha took one metre rope. She wants to know the length of rope in cm and mm. Answer.

**Ans:** The length of rope in cm is 100 and in mm is 1000.

**Q35:** km is equal to \_\_\_\_\_m and \_\_\_\_\_cm.

**Ans:** 1000 m and 100000 cm

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### Short Q&A:

**Q1:** What is rectilinear motion? Give an example.

**Ans:** When objects move along a straight line such motion is called rectilinear motion. A sprinter in 100m race move along a straight track. This is an example of rectilinear motion.

**Q2:** Why can't we use an angul (finger) or mutthi (fist) as standard unit of measurement of length?

**Ans:** We cannot use an angul (finger) or mutthi (fist) as standard unit of measurement of length because the sizes of body parts of different people are different. So it can create confusion.

**Q3:** What is the system of unit of measurement used all over the world now? What is that for length?

**Ans:** International system of units (SI Units) is the system of unit of measurement used all over the world now. SI unit for length is metre.

**Q4:** The height of a girl is 1.50 m. Express it into cm and mm.

**Ans:** The height of a girl in cm is 150 cm and in mm is 1500 mm.

**Q5:** What is the difference between motion of ceiling fan and motion of a pendulum?

**Ans:** Motion of ceiling fan is circular motion and motion of a pendulum is periodic motion.

**Q6:** What is circular motion? Give example.

**Ans:** When an object moves in a circular path, such motion is called circular motion. For example- Motion of a point marked on the blade of an electric fan is a circular motion.

**Q7:** Why can't we use elastic tape to measure distances?

**Ans:** We can't use elastic tape to measure distances because we will not know how much we stretched the tape during measurement. It will cause error.

**Q8:** What is periodic motion? Give example.

**Ans:** An object repeats its motion after some time; this type of motion is called periodic motion. For example- Motion of a pendulum is a periodic motion.

**Q9:** Arrange the following in increasing order:

1 km, 5 cm, 10 mm

**Ans:** 10 mm, 5 cm, 1 km

**Q10:** The distance between Ram's house and Ravi's house is 3000 m. Express it in km.

**Ans:**  $1000\text{ m} = 1\text{ km}$ . Therefore  $3000\text{ m} = 3\text{ km}$ .

**Q11:** What is the difference between motion of a falling stone and motion of a stone tied to a thread and whirled with hand?

**Ans:** The motion of a falling stone is rectilinear motion and motion of a stone tied to a thread and whirled with hand is circular motion.

**Q12:** A thread is 2 m long. Express its length in cm and mm.

**Ans:** 200 cm and 2000 mm

**Q13:** How can we measure a curved line?

**Ans:** We can measure the length of a curved line by using a thread. Measure the length between the beginning and final mark on the thread.

**Q14:** Reena is 10 cm taller than shikha. Height of shikha is 160 cm. What is height of Reena?

**Ans:** Height of Reena is 170 cm.

**Q15:** Arrange the following in decreasing order:  
1 km, 1 mm, 1 cm, 1 m

**Ans:** 1 km, 1 m, 1 cm, 1 mm.

**Q16:** What is the difference between rectilinear and circular motion?

**Ans:** When objects move along a straight line such motion is called rectilinear motion. Whereas when an object moves in a circular path, such motion is called circular motion.

**Q17:** Name some units of length?

**Ans:** Units of length are kilometres, metres, centimetres, millimetres etc.

**Q18:** What is the difference between kilometres and kilogram?

**Ans:** Kilogram is the unit of weight whereas a kilometre is unit of length.

**Q19:** Fill in the blanks:

1. Motion of wheel of car is \_\_\_\_\_ motion.
2. Motion of strings of guitar is \_\_\_\_\_ motion.
3. 3 km is equal to \_\_\_\_\_m.
4. Motion of a pendulum is \_\_\_\_\_ motion.

**Ans:**

1. circular
2. Periodic
3. 3000
4. Periodic.

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## Long Q&A:

**Q1:** What are different types of motion? Explain with example.

**Ans:** When objects move along a straight line such motion is called rectilinear motion. A sprinter in 100m race move along a straight track. This is an example of rectilinear motion. When an object moves in a circular path, such motion is called circular motion. For example- Motion of a point marked on the blade of an electric fan is a circular motion. An object repeats its motion after some time; this type of motion is called periodic motion. For example- Motion of a pendulum is a periodic motion.