INDIAN SCHOOL AL WADI AL KABIR		
CLASS: VI	**DEPARTMENT: SCIENCE** **2023 - 2024**	**DATE: 05/09/2023**
TEXTBOOK Q & A	**TOPIC: MOTION AND MEASUREMENT OF DISTANCES**	**NOTE: A4 FILE FORMAT**
NAME OF THE STUDENT:	**CLASS & SEC:**	**ROLL NO.**

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

   Ans - (i) Land - Bus, truck, train.

   (ii) Water - Ship, boat.

   (iii) Air - Aeroplane, Helicopter.

2. **Fill in the blanks:**

   (i) One metre is **100** cm.

   (ii) Five kilometres is **5000** m.

   (iii) The motion of a child on a swing is **periodic.**

   (iv) The motion of the needle of a sewing machine is **periodic.**

   (v) The motion of the wheel of a bicycle is **circular/rotational.**

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

   Ans - 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.

   Ans - 1 millimetre < 1 centimetre < 1 metre < 1 kilometre

5. **The height of a person is 1.65 m. Express it in cm and mm.**

   Ans - (a) 1.65 m, as one metre = 100 cm

   $$= 1.65 \times 100 \text{ cm} = \underline{165 \text{ cm}}$$

   (b) 1 cm = 10 mm, Thus 165 cm = 165 x 10 mm = <u>1650 mm.</u>

6. **The distance between Radha's home and her school is 3250 m. Express this distance in km.**

   Ans - Distance between Radha's home and her school = 3250 m

   $$1 \text{ km} = 1000 \text{ m}$$

   $$\text{So, } 3250 \text{ m} = \frac{3250}{1000} \text{ km}$$

   $$= 3.250 \text{ km}$$

   Thus, the distance between Radha's home and her school is = <u>3.250 km</u>

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?**

   Ans - Length of the needle = 33.1 cm – 3.0 cm

   $$= \underline{30.1 \text{ cm.}}$$

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

   Ans - (i) <u>Similarity:</u> Both the wheel of a bicycle and a ceiling fan exhibit motion on a fixed axis/circular motion.

   (ii) <u>Dissimilarity:</u> Bicycle moves forward and thus executes rectilinear motion but the fan does not show such motion.

9. **Why could you not use an elastic measuring tape to measure distance? What would be some of the problems you would meet in telling someone about a distance you measured with an elastic tape?**

   <u>Ans</u> **- An elastic measuring tape gives the incorrect length of the distance between two points.**

   <u>Reasons:</u>

   (i) The length of the elastic tape varies and depends upon the force by which it is stretched.

   (ii) Measurement would vary between 2 or 3 readings even when measured by the same person and by the same elastic tape.

   (iii) Measurement would also vary if different persons measure the same distance.

10. **Give two examples of periodic motion.**

    <u>Ans</u> **- (i) Oscillations of a pendulum.**

    (ii) Motion of swing/motion of the earth around the sun.

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