ST. ANDREWS SCOTS SCHOOL

Adjacent Navniti Apartments,

I.P. Extension, Patparganj, Delhi-110092

Session 2025-2026

Class: VI	Subject: Science	Chapter: Measurement of length and motion

CHECKPOINT 1.

1. Unit **2.** Foot **3.** Metre **4.** Temperature

CHECKPOINT 2.

1. Cubit **2**. Fundamental Quantity **3**. Kelvin (k) **4**.s **5**. Metric system

CHECKPOINT 3.

1.True **2.** False **3.** False **4.** True **5**. False

PRACTICE TIME

A. Tick the correct answers.

1. (b) **2.** (a) **3.** (a) **4.** (c) **5.** (d)

B. Assertion and Reason.

1. (c) **2.** (a) **3.** (a) **4.** (d) **5.** (b)

C. Fill in the blanks

1. Angul **2.** Fundamental **3.** Rectilinear **4.** Oscillatory **5.** Periodic

D. Very short answer type questions.

1. Measurement is the comparison of an unknown quantity with some known fixed quantity of the same kind

2. The length between the tip of the middle finger and the elbow of one's arm is known as a cubit.

3. Multiples of kilogram are quintal and metric tonne while its submultiples are hectogram, decagram and gram

4. When an object changes its position with respect to a fixed point with time, it is said to be in motion.

5. In a hilly area, a moving bus has curvilinear motion.

E. Short answer type questions.

1. In 1790, a committee of French Academy devised a decimal system of units for measurement which is called the metric system of units. In this system, the length is measured in centimetre, mass in gram and time in second (CGS).

2. Quantities which do not depend on other quantities are called fundamental quantities. The seven fundamental quantities are: mass, length, time, electric current, temperature, luminous intensity and amount of substance

3. In CGS system, length is measured in centimetre, mass is measured in gram while in MKS, they are measured in metre and kilogram respectively. However, time is measured in second in both the systems.

4. An object in a to-and-fro motion about a fixed point is said to be in oscillatory motion. For example, motion of a pendulum of a clock, motion of a swing, etc.

5. Some examples of multiple motions are:
   a. A moving car has translatory motion as a whole, but its wheels show rotatory motion.
   b. A rolling ball has rotatory as well as translatory motions.
   c. The earth has rotatory motion on its axis and revolutionary motion around the sun.
   d. A drill machine while using has rectilinear as well as rotatory motions.

F. Long answer Type Questions

1. The units of seven fundamental quantities and their derived units are called SI units. The SI unit of length is metre (m), of mass is kilogram (kg), of time is second (s) and that of temperature is kelvin (K).

2. To measure the length of a curved line, say PQ, by using a thread, tie a knot at its one end. Place this knot at one end of the curved line (P). Carefully, move the thread along the length of the curved line, holding the thread at small distances between your thumb and first finger. Continue until you reach the other end of the curved line (Q). Put a mark on the thread using a pen, where it touches the end point. Now, stretch the thread along a

metre scale. The length of a thread between the knot and the pen mark is equal to the length of the curved line.

3. If a body moves on the whole from one place to another, so that all its body parts move the same distance in a given time, it is said to be in a translatory motion. Translatory motion is of two types:
   - Rectilinear motion: When an object, on a whole, moves along a straight path, it is said to be in rectilinear motion, e.g., a car moving on a straight road shows rectilinear motion.
   - Curvilinear motion: When an object, on a whole, moves along a curved path, it is said to be in curvilinear motion, e.g., a car moving on a curved road shows curvilinear motion.

4. A ball rolling on an inclined surface has multiple motions. When the ball moves down, it shows translatory (rectilinear) motion. At the same time, it is rolling about its centre-point (say, axis) which shows that it is in rotatory motion too.

5. The motions which repeat after a fixed interval of time are called periodic motions. For example, the earth completes it's one rotation in 24 hours and one revolution in 365.25 days and the pendulum of a clock completes one oscillation in 1 second.
   Some motions which repeat themselves but not after a fixed interval of time are called nonperiodic motions. For example, beating of a drum or the heartbeat of a sick person.

G. HOTS questions

1. Do Yourself.

2. Do Yourself.

3. (a) Virat's height is 117 cm.

(b) 117 cm = 1 m 17 cm
or = 1.17 m (1 m = 100 cm)
117 cm = 46 inches (1 inch = 2.54 cm)

(c) A height of 150 cm can be measured with this scale.