



Motion

A body is said to be in motion, when it changes its position with respect to time.

e.g. Rotation of the Earth around the Sun, a running car, hands of the clock, etc.

A body is said to be in rest, when it does not change its position with respect to time.

e.g. A bottle on the table, a table in the room, a clock on the wall, etc.

Some of the important types of motion are given below

1. Rectilinear Motion

Motion in a straight path without changing its direction is called rectilinear motion.

- e.g. • Vehicle running on straight road.
- March-past of soldiers.
 - Sprinters in a race.

2. Circular Motion

Motion around a circular path is called circular motion.

- e.g. • Rotation of Moon around Earth.
- Motion of bullock.
 - Motion of children sitting on merry-go-around.

3. Periodic Motion

Motion which repeats itself after a regular interval is called periodic motion.

- e.g. • Motion of a simple pendulum.
- Motion of a needle of a sewing machine.
 - String of guitar.

4. Rotational Motion

Motion in which body is turning around its own axis.

- e.g. • Wheel of a car.
- Motion of earth around its axis.
 - Agitator in washing machine.

Uniform and Non-uniform Motion

- An object which covers equal distance in equal interval of time, is said to be in uniform motion.
e.g. A car moving along a straight path such that it covers equal distances in equal time.
- If an object covers unequal distances in equal interval of time, is said to be non-uniform motion.
e.g. A car moving on a crowded street.



Practice Exercise

- 10.** The motion of minute hand of our wrist watch is an example of
(a) rectilinear motion (b) periodic motion
(c) circular motion (d) rotational motion
- 11.** Motion of the needle of a sewing machine is
(a) circular motion
(b) periodic motion
(c) rectilinear motion
(d) rotational motion
- 12.** A car is running on the road, the motion on its wheel is an example of
(a) circular motion
(b) rotational motion
(c) rectilinear motion
(d) periodic motion
- 13.** A bike moving along a straight line path such that it covers equal distance in equal time is said to be
(a) periodic motion
(b) rectilinear motion
(c) non-uniform motion
(d) uniform motion
- 14.** If an object moving along a straight line, keep changing its speed then
(a) the motion is said to be a non-uniform motion
(b) the motion is said to be uniform motion
(c) the object is said to be in rest
(d) the object is said to be a fast motion
- 15.** A car moving around a crowded street is an example of
(a) uniform motion
(b) non-uniform motion
(c) rectilinear motion
(d) None of the above

Answers

[illegible]