# **Motion and Time**

1. Speed space equals space fraction numerator Total space distance space covered over denominator Total space time space taken end fraction

2. If speed is the same throughout a journey, then the motion is uniform.

- 3. If speed varies, then the motion is non-uniform.
- 4. Speed is measured by a speedometer.
- 5. Distance moved by a vehicle is measured by an odometer.
- 6. Distance covered = Speed × Time
- 7. For equal distance, less travel time means higher speed.
- 8. For equal time interval, greater distance covered means higher speed.

### Units

- 1. Basic unit of time is second (s).
- 2. Basic unit of speed is metre/second (m/s).

#### **Time measurement**

- 1. Time-measuring device watch or clock
- 2. Motion of hands of clock is periodic.
- 3. Motion of pendulum is periodic and oscillatory (to-and-fro).
- 4. Techniques Electrical oscillators, electronic oscillators, quartz crystal clocks, atomic clocks.

### **Time period**

- 1. It is the time taken by a pendulum to complete one oscillation. It is given as
- 2. Basic unit of time is second (s).

### Motion

Rectilinear	Circular	Periodic
Along straight	Along circular	Along same path in
line	path	equal intervals of time

## **Distance-time graph**

- 1. A line graph is used for distance-time graph.
- 2. x-axis represents time, y-axis represents distance



Speed of A is greater than that of B