Comparison between speed and velocity

1. The average speed of a body is always positive (+ve) and cannot be zero if the body has ever moved. Velocity can be Positive(+ve), negetive (-ve) or zero.
2. The magnitude of average velocity of a body in a time interval is less than or equal to the average speed of the body in same time interval.

   i.e. **|av. velocity| ≤ av. Speed**

   [If the motion of an object is along a straight line and in the same direction, the magnitude of displacement is equal to the total path length. In that case, the magnitude of average velocity is equal to the average speed]
3. The magnitude of instantaneous velocity of a body is equal to its instantaneous speed.

[It should be noted that though average speed over a finite interval of time is greater or equal to the magnitude of the average velocity, instantaneous speed at an instant is equal to the magnitude of the instantaneous velocity at that instant.]

UNIFORM MOTION

When a body moves such that it covers equal displacement in equal time, its motion is called uniform motion.

So, in case of uniform motion velocity of the body remains constant.

- In case of uniform motion the instantaneous velocity is equal to the average velocity of the body. i.e. $V_{inst} = V_{average} = V$