

## CHAPTER-7 | Motion

QUIZ  
PART-03

1. Velocity is the rate of change of:

- A. Distance
- B. Displacement
- C. Speed
- D. Acceleration (B)

**Explanation :** Velocity is defined as displacement per unit time.

2. SI unit of velocity is:

- A. m/s
- B. km/h
- C.  $m/s^2$
- D. km/s (A)

**Explanation :** The SI unit of velocity is metre per second.

3. Velocity is a:

- A. Scalar quantity
- B. Vector quantity
- C. Force
- D. Mass (B)

**Explanation :** Velocity has both magnitude and direction.

4. Uniform velocity means:

- A. Equal distance in equal time in a given direction
- B. Unequal distance in equal time
- C. Equal speed without direction
- D. Zero displacement always (A)

**Explanation :** In uniform velocity, equal distances are covered in equal intervals of time in the same direction.

5. Average velocity is:

- A. Total distance  $\div$  total time
- B. Total displacement  $\div$  total time
- C. Change in speed  $\div$  time
- D. Final velocity - initial velocity (B)

**Explanation :** Average velocity is total displacement divided by total time.

6. If initial velocity is  $u$  and final velocity is  $v$ , average velocity is:

- A.  $u - v / 2$
- B.  $uv / 2$
- C.  $(u + v) / 2$
- D.  $2u + v$  (C)

**Explanation :** For constant acceleration, average velocity is the mean of initial and final velocities.

7. Acceleration is the rate of change of:

- A. Distance
- B. Time
- C. Velocity
- D. Displacement (C)

**Explanation :** Acceleration means change in velocity per unit time.

8. SI unit of acceleration is:

- A. m/s
- B.  $m/s^2$
- C. km/h
- D.  $m^2/s$  (B)

**Explanation :** The SI unit of acceleration is metre per second squared.

9. Negative acceleration is also called:

- A. Retardation
- B. Rotation
- C. Oscillation
- D. Translation (A)

**Explanation :** When velocity decreases with time, it is called negative acceleration or retardation.

10. Usha swims to the other end of the pool and returns back. Her average velocity is:

- A. 3 m/s
- B. 180 m/s
- C. 1.5 m/s
- D. 0 m/s (D)

**Explanation :** Since her final position is the same as the initial position, displacement is zero, so average velocity is zero.