



## ASSIGNMENT NO. 1

**SUBJECT: PHYSICS**

**CLASS-IX**

**APRIL-May'2026**

### CH 7: MOTION

**Q1. Choose the correct option:**

- i. If displacement is zero, which of the following must be zero?
  - (a) Distance
  - (b) Speed
  - (c) Average velocity
  - (d) Acceleration
- ii. Which graph represents uniformly accelerated motion?
  - a) Straight line in distance-time graph
  - b) Straight line in velocity-time graph
  - c) Curve in velocity-time graph
  - d) Curve in distance-time graph

**Q2.** In each of the following questions, two statements are given- one labeled Assertion (A) and the other labeled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

- a) Both A and R are true, and R is correct explanation of the assertion.
- b) Both A and R are true, but R is not the correct explanation of the assertion.
- c) A is true, but R is false.
- d) Both assertion and reason are false.

(a) **Assertion:** In non-uniform motion, velocity is always changing.

**Reason:** Either magnitude or direction of velocity changes.

(b) **Assertion:** The slope of velocity-time graph gives displacement.

**Reason:** Area under the graph gives acceleration.

**Q3.** A body is thrown vertically upward with velocity 20 m/s. Calculate:

- (a) Time to reach highest point
- (b) Maximum height

**Q4.** Define displacement with example.

**Q5.** A cyclist covers 200 m in 20 s and then 300 m in next 20 s. Find average speed.

**Q6.** A car starts from rest and accelerates uniformly at  $2 \text{ m/s}^2$  for 10 s, then moves with constant velocity for 5 s. Find:

- a) Final velocity
- b) Distance in first phase
- c) Total distance

**Q7.** The graph given below shows the positions of a body at different times. Calculate the speed of the body as it moves from

- (a) A to B
- (b) B to C and
- (c) C to D.

