



Brain International School

Vikas Puri, New Delhi

ASSIGNMENT NO. 2

SUBJECT: PHYSICS

CLASS-IX

MAY'2025

Chapter- 7 Motion

1. Choose the correct option:

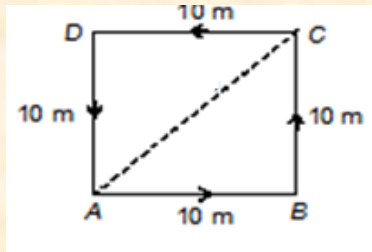
- i. If the displacement of an object is proportional to square of time, then the object moves with
 - a) uniform velocity
 - b) uniform acceleration
 - c) increasing acceleration
 - d) decreasing acceleration
- ii. An athlete takes 50 seconds to go once round a circular path of radius 70 m at the uniform pace. His speed is.
 - a) 7/5 m/s
 - b) 5/7 m/s
 - c) 88 m/s
 - d) 8.8 m/s

2. 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) A is false, but R is true.
- (i) **Assertion:** An object may acquire acceleration even if it is moving at a constant speed.
Reason: With change in the direction of motion, an object can acquire acceleration.
 - (ii) **Assertion:** Acceleration of a moving body is always positive.
Reason: Acceleration of a moving body is the rate of change of velocity.

3. Answer the following questions:

1. How will the equations of motion for an object moving with a uniform velocity change?
2. A physical quantity is measured as -10 ms^{-1} . Is it speed or velocity? Justify.
3. What do you mean by positive and negative acceleration?
4. Summit drives his car at a constant rate of 40 km/h for one hour, and then at a constant rate of 60 km/h for another hour. Find his average speed.
5. Answer the following questions by observing the following diagram:



- a) What is the displacement, when the particle moves from point A to D?
 - b) What is the displacement, when the particle moves from point A to C through A-B-C?
 - c) Find distance and displacement covered when the particle moves in path ABCDA i.e. starts from A and ends at A?
6. a) Draw a graph between distance and time for a car moving with non-uniform speed.
- b) A body is accelerating at a constant rate of 10 m/s^2 . If the body starts from rest, how much distance will it go in two seconds?