

Sample paper

Class IX

Sub: Physics(Science)

Chapter-1 (Motion)

Que.1 The following question consists of two statements- Assertion (A) and Reason (R). Answer the question selecting the appropriate options given below:

- (a) Both A and R are true and R is the correct explanation of A
 - (b) Both A and R are true but R is not the correct explanation of A
 - (c) A is true but R is false
 - (d) A is false but R is true
- (1) Assertion (A): The velocity of a body is a scalar quantity.
Reason(R): The vector quantity has both magnitude and direction.
- (2) Assertion (A): The displacement of a body may be zero, though its distance is finite.
Reason (R): If body has moved, the displacement is zero when initial and final positions are same; while distance is finite.
- (3) Assertion (A): An object can have constant speed but variable velocity.
Reason (R): Velocity changes due to change in direction, though speed is same.

Que.2 Choose the correct answer for each of the following

- (1) The slope of position-time graph represents:
- (a) Displacement
 - (b) Speed/velocity
 - (c) Retardation
 - (d) None
- (2) The distance covered by a car moving with a speed of 36km/hr in 15 min. is
- (a) (a) 0.9km (b) 9.0km (c) 90km (d) 900km
- (3) In which of the following cases of motions, the distance moved and the magnitude of displacement are equal
- (a) If the car is moving on a straight road
 - (b) If the car moving in a circular path
 - (c) The pendulum is moving to and fro
 - (d) The earth is revolving around the sun.

Que.03 What does the path of an object look like when it is uniform motion?

Que.04 Abdul, while driving to school, computes the average speed for his trip to be 20km/h. On his return trip along the same route, there is less traffic and the average speed is 30km/h. What is the average speed for Abdul's trip?

Que.05 Distinguish between speed and velocity.

Que.06 A car at rest accelerates uniformly to a speed of 144km/hr in 20s. How much distance is covered by the car?

Que.07 Derive the equations of motion by analytical method.

Que.08 Define the following term;

- (a) Displacement
- (b) Average velocity
- (c) Acceleration
- (d) Retardation

Que. 09 A car travels with the speed 40 km/hr from a city A to the city B and returns back with a speed of 60 km/hr. Calculate (1) Average speed of car (2) Average velocity of car.

Que.10 With the help of velocity time graph show uniform velocity, uniform acceleration and non uniform acceleration.

Que.11 A truck starts from rest and rolls down a hill with constant acceleration. It travels a distance of 400m in 20 sec. Find its acceleration.

Que.12 A ball is dropped gently from a height of 20m. If its velocity increases uniformly at the rate of 10ms^{-2} , with what velocity will it strike the ground? After what time will it strike the ground?