



DOON PUBLIC SCHOOL

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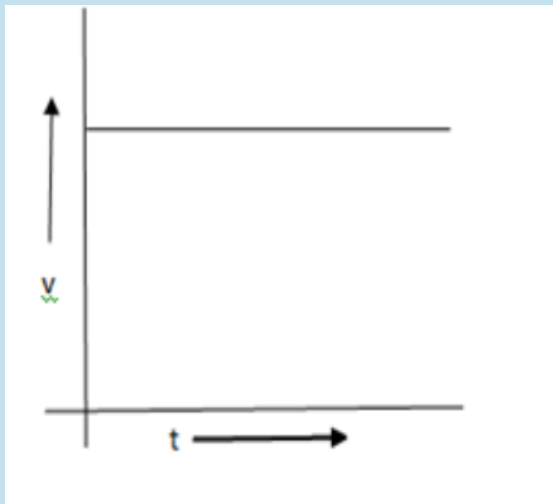
Class IX Physics
Motion (Vacation Worksheet-1)

QA Multiple choice questions (MCQ) Choose the correct answer.

1) 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

2) From the given v-t graph, it can be inferred that the object is



- (a) At rest
- (b) In uniform motion
- (c) Moving with uniform acceleration

(d) In non-uniform motion

3) Suppose a boy is enjoying a ride on a merry-go-round which is moving with a constant speed of 10 m/s. It implies that the boy is:

(a) At rest

(b) Moving with no acceleration

(c) In accelerated motion

(d) Moving with uniform velocity

4) A particle is moving in a circular path of radius r .

The displacement after half a circle would be:

(a) Zero

(b) πr

(c) $2r$

(d) $2\pi r$

5) Which of the following can sometimes be 'zero' for a moving body?

i. Average velocity

ii. Distance travelled

iii. Average speed

iv. Displacement

(a) Only (i)

(b) (i) and (ii)

(c) (i) and (iv)

(d) Only (iv)



6) Which of the following statement is correct regarding velocity and speed of a moving body?

- (a) Velocity of a moving body is always higher than its speed
- (b) Speed of a moving body is always higher than its velocity
- (c) Speed of a moving body is its velocity in a given direction
- (d) Velocity of a moving body is its speed in a given direction

7) When a car driver travelling at a speed of 10 m/s applies brakes and brings the car to rest in 20 s, then the retardation will be:

- (a) + 2 m/s²
- (b) - 2 m/s²
- (c) - 0.5 m/s²
- (d) + 0.5 m/s²

8) Which of the following is most likely not a case of uniform circular motion?

- (a) Motion of the earth around the sun
- (b) Motion of a toy train on a circular track
- (c) Motion of a racing car on a circular track
- (d) Motion of hours' hand on the dial of a clock

9) In which of the following cases of motions, the distance moved and the magnitude of the displacement are equal?

- i. If the car is moving on a straight road
- ii. If the car is moving in circular path
- iii. The pendulum is moving to and fro
- iv. The earth is moving around the sun

- (a) only(ii)

(b) (i) and (iii)

(c) (ii) and (iv)

(d) only (i)

10) A car is travelling at a speed of 90 km/h. Brakes are applied so as to produce a uniform acceleration of -0.5 m/s^2 . Find how far the car will go before it is brought to rest?

(a) 8100 m

(b) 900 m

(c) 625 m

(d) 620 m

QB Fill in the blanks:

1. When s-t graph is parallel to x-axis, the body is_____.
2. When v-t graph is parallel to x-axis, the body is_____.
3. The slope of v-t graph for a body in uniformly accelerated motion is_____.
4. The slope of displacement-time graph for a car parked in a parking area is_____.
5. Acceleration is a_____quantity,

QC True/False:

1. Velocity of an object in uniform circular motion is constant.
2. A car moving on a crowded road with a number of traffic red signals is in non-uniform motion.
3. Displacement of a body can be positive or zero, but never negative.
4. Angular displacement is measured in radians.
5. A freely falling body is uniformly accelerated.