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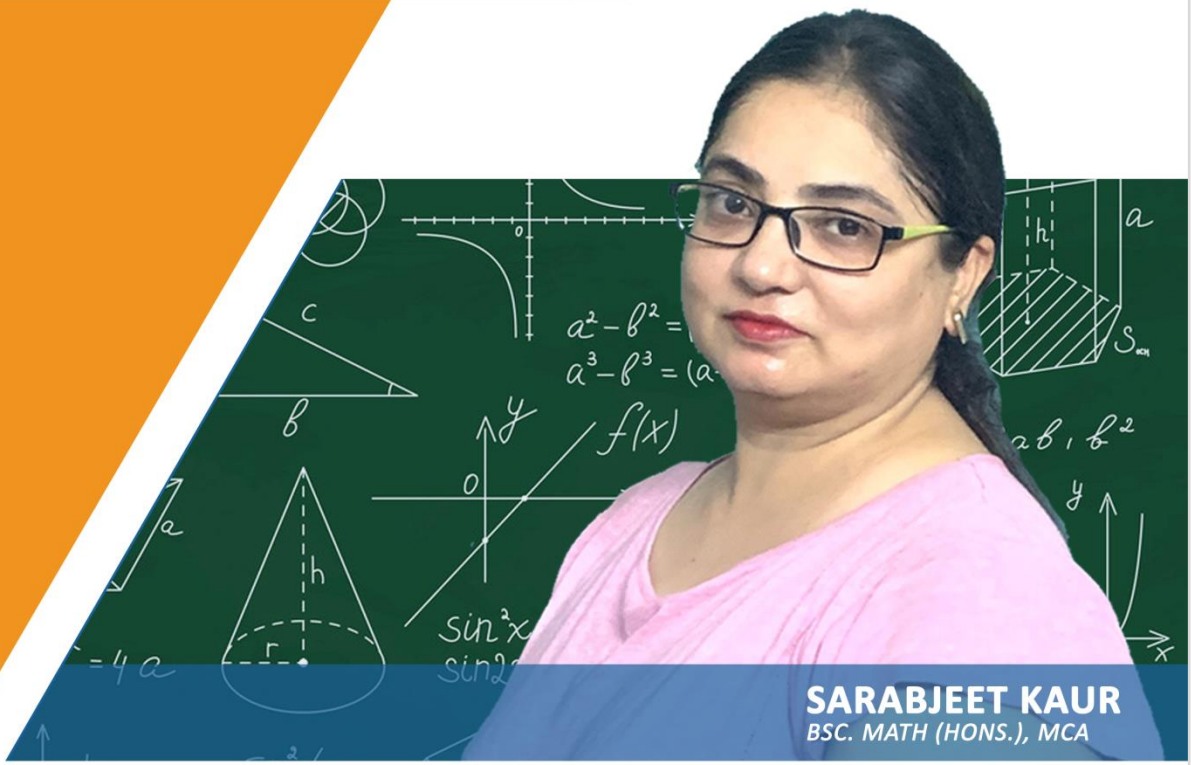

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BSC. MATH (HONS.), MCA

GRADE 9TH MATHS
CHAPTER 8

Motion

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MCQ Questions for Class 9 Science Chapter 8 Motion

Question 1.

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) 2πr

Question 2.

The numerical ratio of displacement to distance for a moving object is

(a) always less than 1

(b) always equal to 1

(c) always more than 1

(d) equal or less than 1

Question 3.

If the displacement of an object is proportional to square of time, then the object moves with

(a) uniform velocity

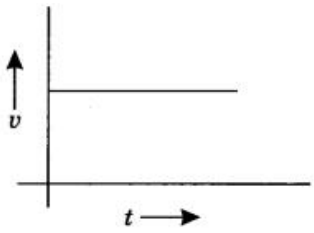
(b) uniform acceleration

(c) increasing acceleration

(d) decreasing acceleration

Question 4.

From the given υ – t graph, it can be inferred that the object is



(a) in uniform motion

(b) at rest

(c) in non-uniform motion

(d) moving with uniform acceleration

Question 5.

Suppose a boy is enjoying a ride on a merry-go-round which is moving with a constant speed of 10 ms^{-1} It implies that the boy is

(a) at rest

(b) moving with no acceleration

(c) in accelerated motion

(d) moving with uniform velocity

Question 6.

Area under a υ –t graph represents a physical quantity which has the unit

(a) m^2

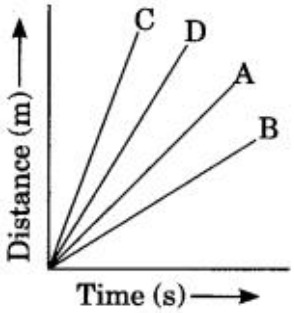
(b) m

(c) m^3

(d) ms^{-1}

Question 7.

Four cars A, B, C and D are moving on a levelled road. Their distance versus time graphs are shown in the adjacent figure. Choose the correct statement.



(a) Car A is faster than car D.

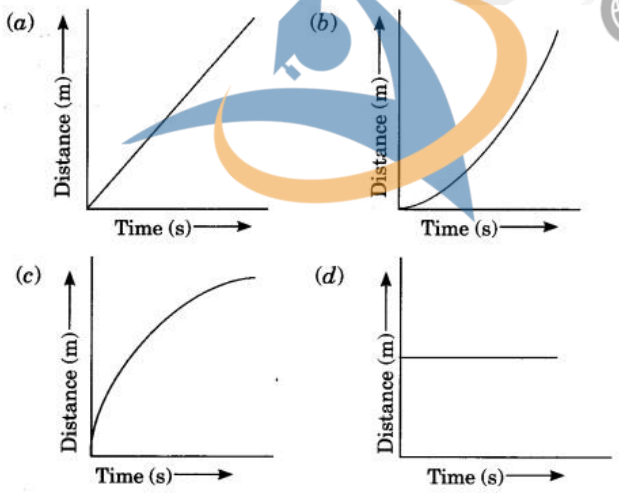
(b) Car B is the slowest.

(c) Car D is faster than car C.

(d) Car C is the slowest.

Question 8.

Which of the following figures correctly represents uniform motion of a moving object?



Question 9.

Slope of a velocity-time graph gives

(a) the distance

(b) the displacement

(c) the acceleration

(d) the speed

Question 10.

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 is moving in Circular path

(c) The pendulum is moving to and fro

(d) The earth is revolving around the sun.

Question 11.

A boy goes from A to B with a velocity of 20 m/min and comes back from B to A with a velocity of 30 m/min. The average velocity of the boy during the whole journey is

(a) 24 m/min

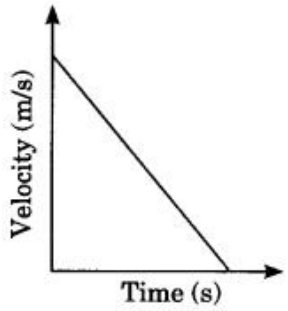
(b) 25 m/s

(c) Zero

(d) 20 m/min

Question 12.

Velocity-time graph of an object is given below. The object has



(a) Uniform velocity

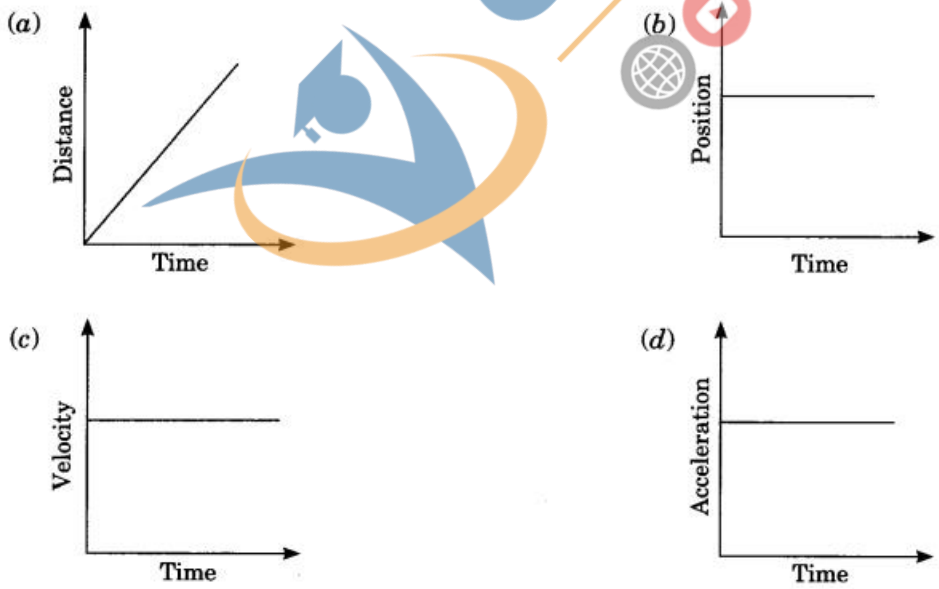
(b) Uniform speed

(c) Uniform retardation

(d) Variable acceleration

Question 13.

Which one of the following graphs shows the object to be stationary?



Question 14.

A body is projected vertically upward from the ground. Taking vertical upward direction as positive and point of projection as origin, the sign of displacement of the body from the origin when it is at height h during upward and downward journey will be

(a) Positive, positive

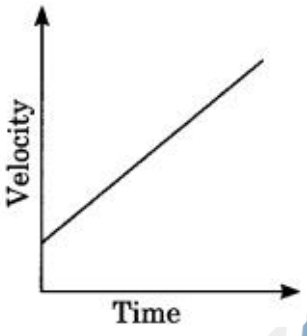
(b) Positive, negative

(c) Negative, negative

(d) Negative, positive

Question 15.

According to the given velocity-time graph, the object



(a) is moving with uniform velocity

(b) has some initial velocity

(c) is moving uniformly with some initial velocity

(d) is at rest

Question 16.

The ratio of speed to the magnitude of velocity when the body is moving in one direction is

(a) Less than one

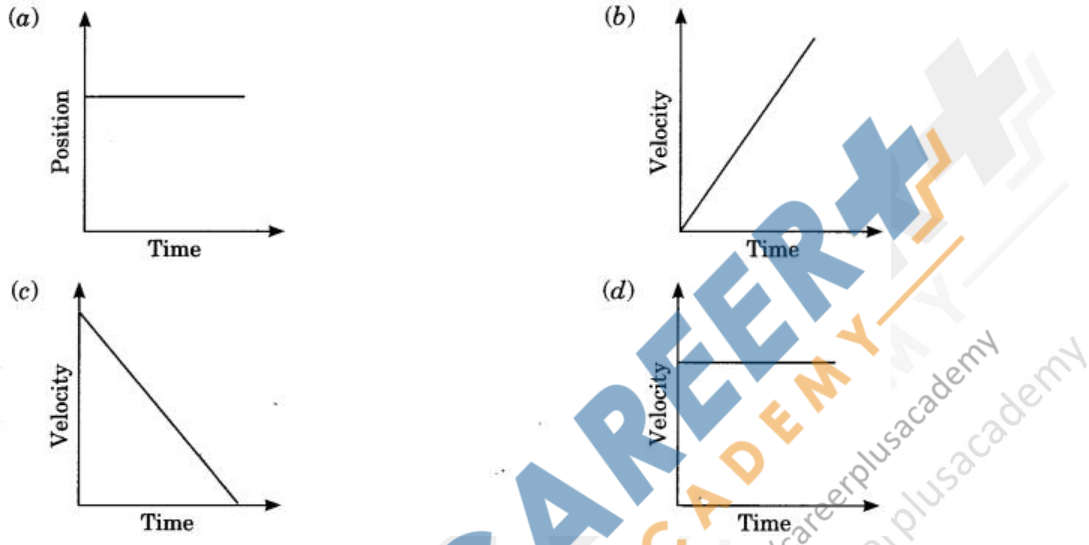
(b) Greater than one

(c) Equal to one

(d) Greater than or equal to one

Question 17.

A car is moving along a straight road with uniform velocity. It is shown in the graph.



Question 18.

Which of the following situations is possible?

(a) An object can have acceleration, but constant velocity.

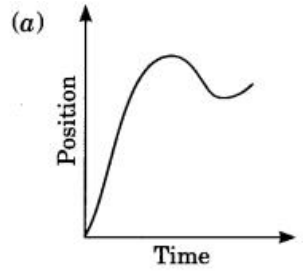
(b) The velocity of an object may be zero but acceleration is not zero.

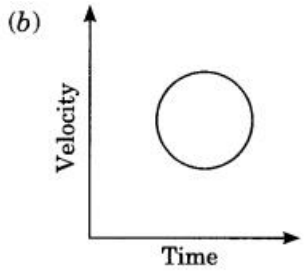
(c) Distance and the magnitude of displacement are equal in circular motion.

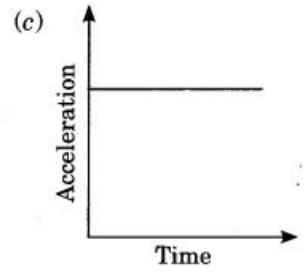
(d) Average speed and the magnitude of average velocity are always equal in circular motion.

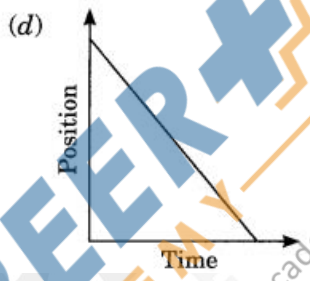
Question 19.

Which of the following graphs is not possible?









Fill in the blanks:

1. The total path length travelled by a body in a given interval of time is called .....

2. A body moving in a straight line has a uniform motion if it travels ..... distance in ..... intervals of time.

3. Velocity is defined as ..... per unit time.

4. Speed is scalar quantity and velocity is ..... quantity.

5. If speed of a body is continuously decreasing, the body is said to .....

6. Acceleration is vector quantity and its SI unit is .....

7. A physical quantity that has magnitude as well as ..... is called vector quantity.

8. The slope of velocity-time graph gives ..... and the slope of displacement-time graph gives .....

III. Match the following columns

Column I	Column II
(a) Straight line parallel to time axis in velocity-time graph	(i) Scalar quantity
(b) Distance	(ii) Body at rest
(c) Displacement	(iii) Motion of object in circular path with uniform speed
(d) Straight line parallel to time axis in position time graph	(iv) Body in uniform motion
(e) Uniform circular motion	(v) Rate of change of velocity with respect to time
(f) Slope of velocity-time graph gives	(vi) Shortest distance between initial and final position
(g) Acceleration	(vii) Acceleration