

## Kinematics

Sr	Questions	Answers Choice
1	The area under the speed-time graph is numerically equal to	A. Distance covered B. Velocity C. Uniform velocity D. Acceleration
2	Motion of a screw of rotating fan is	A. Circular Motion B. Vibratory motion C. Rotatory motion D. Random Motion
3	If a cyclist has acceleration of $2 \text{ m/s}^2$ for 5 seconds, the change in velocity of the cyclist is.	A. $15 \text{ m/s}$ B. $10 \text{ m/s}$ C. $2 \text{ m/s}$ D. $20 \text{ m/s}$
4	Change in position of a body from initial to final point is called	A. Velocity B. Speed C. Displacement D. Distance
5	A cyclist is travelling in a westward direction and produces a deceleration of $8 \text{ m/s}^2$ to stop	A. West B. North C. East D. South
6	Ball dropped freely from a tower reaches ground in 4 s, the speed of impact of ball is.	A. $2.45 \text{ m/s}$ B. $39.2 \text{ m/s}$ C. $0 \text{ m/s}$ D. $19.6 \text{ m/s}$
7	A ball is dropped from the top of a tower, the distance covered by it in the first second is.	A. 5 m B. 10 m C. 50 m D. 100 m
8	In 5 s a car accelerates so that its velocity increases by $20 \text{ m/s}$ . The acceleration is	A. $0.25 \text{ m/s}^2$ B. $4 \text{ m/s}^2$ C. $100 \text{ m/s}^2$ D. $25 \text{ m/s}^2$
9	A body accelerates from rest to a velocity of $144 \text{ km/h}$ in 20 seconds. The distance covered by it is.	A. 100 m B. 1400 m C. 400 m D. 1440 m
10	When the slope of a body's displacement-time graph increases the body is moving with	A. Constant velocity B. Increasing velocity C. Decreasing velocity D. All of these
11	A rider is traveling a hours. He moves 60 meters towards right in 3 seconds. Then it turns back and travels 30 meters in 2 seconds. Find its average velocity.	A. $18 \text{ m/s}$ B. $6 \text{ m/s}$ C. $0 \text{ m/s}$ D. $35 \text{ m/s}$
12	Slope of distance-time graph is.	A. Speed B. Velocity C. Acceleration D. Displacement
13	The numerical ratio of displacement to distance is	A. Equal to or less than one B. Always greater than one C. Always equal to one D. Always less than one
14	Area under speed-time graph is equal to.....of moving body	A. Acceleration B. Distance C. Change in velocity D. Uniform velocity
15	A body is moving with constant acceleration starting from rest. It covers a distance S in 4 seconds. How much time does it take to cover one-fourth of this distance.	A. 1 s B. 2 s C. 4 s D. 16 s

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16 A girl walks 3 km towards west and 4 km towards south. What is the magnitude of her total distance and displacement respectively.

A. 7 km, 5 km  
B. 7 km, 7 km  
C. 1 km, 7 km  
D. 7 km, 1 km

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17 If a body does not change its position with respect to some fixed point, then it will be in a state of.

A. Motion  
B. Uniform motion  
C. Rest  
D. Variable motion

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18 A car is moving with velocity of 10 m/s. If it has acceleration of 2 m/s<sup>2</sup> for 10 seconds. What is final velocity of the car.

A. 20 m/s  
B. 10 m/s  
C. 30 m/s  
D. 15 m/s

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19 A ball is thrown straight up, what is the magnitude of acceleration at the top of its path.

A. 9.8 m/s<sup>2</sup>  
B. zero  
C. 19.6 m/s<sup>2</sup>  
D. 4.9 m/s<sup>2</sup>

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20 Gradient of the speed-time graph is equal to.

A. Speed  
B. distance covered  
C. Acceleration  
D. Velocity

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