

## Kinematics

Sr	Questions	Answers Choice
1	In 5 s a car accelerates so that its velocity increases by 20 m/s. The acceleration is	A. 0.25 m/s <sup>2</sup> B. 4 m/s <sup>2</sup> C. 100 m/s <sup>2</sup> D. 25 m/s <sup>2</sup>
2	A body accelerates from rest to a velocity of 144 km h <sup>-1</sup> in 20 seconds. The the distance covered by it is.	A. 100 m B. 1400 m C. 400 m D. 1440 m
3	Change in position of a body from initial to final point is called	A. Velocity B. Speed C. Displacement D. Distance
4	Area under speed-time graph is equal to.....of moving body	A. Acceleration B. Distance C. Change in velocity D. Uniform velocity
5	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
6	Gradient of the distance -time graph is equal to the	A. Distance covered B. Acceleration C. Speed D. Velocity
7	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
8	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
9	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
10	When the slope of a body's displacement time graph increase the body is moving with	A. Constant velocity B. Increasing velocity C. Decreasing velocity D. All of these
11	Motion of a screw of rotating fan is	A. Circular Motion B. Vibratory motion C. Rotatory motion D. Random Motion
12	A rider is training a horse. Horse 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 m/s B. 6 m/s C. 0 m/s D. 35 m/s
13	Gradient of the speed-time graph is equal to.	A. Speed B. distance covered C. Acceleration D. Velocity
14	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
15	Slope of distance-time graph is.	A. Speed B. Velocity C. Acceleration D. Displacement

16	Ball dropped freely from a tower reaches ground in 4 s, the speed of impact of ball is.	A. 2.45 m/s B. 39.2 m/s C. 0 m/s D. 19.6 m/s
17	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>
18	The area under the speed-time graph is numerically equal to	A. Distance covered B. Velocity C. Uniform velocity D. Acceleration
19	A cyclist is travelling in a westward direction and produces a deceleration of 8 m/s <sup>2</sup> to stop	A. West B. North C. East D. South
20	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
21	If a cyclist has acceleration of 2 m/s <sup>2</sup> for 5 seconds, the change in velocity of the cyclist is.	A. 15 m/s B. 10 m/s C. 2 m/s D. 20 m/s