

## Kinematics

Sr	Questions	Answers Choice
1	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
2	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>
3	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
4	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
5	Gradient of the speed-time graph is equal to.	A. Speed B. distance covered C. Acceleration D. Velocity
6	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
7	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
8	The area under the speed-time graph is numerically equal to	A. Distance covered B. Velocity C. Uniform velocity D. Acceleration
9	A rider is training a horse. The 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
10	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
11	A body accelerates from rest to a velocity of 144 km h <sup>-1</sup> in 20 seconds. The distance covered by it is.	A. 100 m B. 1400 m C. 400 m D. 1440 m
12	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 the final velocity of the car.	A. 20 m/s B. 10 m/s C. 30 m/s D. 15 m/s
13	Motion of a screw of a rotating fan is	A. Circular Motion B. Vibratory motion C. Rotatory motion D. Random Motion
14	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
15	Slope of distance-time graph is.	A. Speed B. Velocity C. Acceleration D. Displacement

16	Area under speed-time graph is equal to.....of moving body	A. Acceleration B. Distance C. Change in velocity D. Uniform velocity
17	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
18	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>
19	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
20	Change in position of a body from initial to final point is called	A. Velocity B. Speed C. Displacement D. Distance