

QUIZEN – Motion in One Dimensions (11P02)

Learning Level 1	Learning Level 2	Learning Level 3
Q - Remembering (knowledge-based questions) U - Understanding (comprehension-based questions)	I - Applying (application-based questions) Z - Analyzing (analysis-based questions)	E - Evaluating (evaluation-based questions) N - Creating (creation-based questions)

Learning Level 1

1. Define acceleration.
2. State the SI unit of acceleration.
3. What is the difference between uniform and non-uniform acceleration?
4. Explain the concept of instantaneous acceleration.
5. A car is moving with a constant acceleration of 2 m/s^2 . If its initial velocity is 10 m/s , what will be its velocity after 5 seconds?

Learning Level 2

6. A particle starts from rest and moves with a constant acceleration. If it covers a distance of 100 m in 5 seconds , calculate its acceleration.
7. A train is moving along a straight track with an initial velocity of 10 m/s . If its acceleration is 2 m/s^2 , find the distance covered by the train in 8 seconds .
8. An object is thrown vertically upwards with an initial velocity of 20 m/s . Determine the maximum height reached by the object.

9. A car starts from rest and accelerates uniformly at a rate of 4 m/s^2 for a distance of 200 m. Calculate the final velocity of the car.
10. A body is moving in a straight line with a uniform acceleration. If its initial velocity is 5 m/s and final velocity is 25 m/s, and it covers a distance of 200 m, find the acceleration.

Learning Level 3

11. A particle is thrown vertically upwards. Plot a velocity-time graph for its motion.
12. A car is moving along a straight road with a constant acceleration. Sketch a displacement-time graph for its motion.
13. A ball is dropped from a certain height and falls freely under the influence of gravity. Derive an equation for the distance traveled by the ball in terms of time.
14. A cyclist starts from rest and accelerates at a constant rate. Derive an equation for the final velocity of the cyclist in terms of the initial velocity, acceleration, and time.
15. A stone is thrown vertically upwards with an initial velocity of 20 m/s. Derive an equation for the time taken by the stone to reach its maximum height.

Learning Level 2
Learning Level 3

