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. What is the difference between position and displacement?
2. State the SI unit of velocity.
3. Define instantaneous velocity.
4. A car travels 20 km to the east in 30 minutes. What is its average speed?
5. A body is moving with a uniform velocity of 10 m/s. What is its acceleration?

Learning Level 2:

1. A particle starts from rest and moves with uniform acceleration. If it covers a distance of 100 m in 5 seconds, what is its acceleration?
2. A train starts from rest and accelerates at 2 m/s^2 for 20 seconds. What is its final velocity?
3. A cyclist starts from a point A and travels towards point B, covering a distance of 20 km in 1 hour. The cyclist then turns back and travels towards point A, covering the same distance in 2 hours. Calculate the average speed and average velocity of the cyclist.
4. A ball is thrown vertically upwards with an initial velocity of 20 m/s. What is its maximum height and the time taken to reach it?
5. A car moves with an initial velocity of 10 m/s and decelerates uniformly to come to rest in 5 seconds. What is the distance travelled by the car during this time?

Learning Level 3:

1. A particle starts from rest and moves with uniform acceleration. If it covers a distance of 100 m in t seconds, what is its acceleration in terms of t?
2. A car moves with a uniform acceleration of 2 m/s^2. If it covers a distance of 500 m, what is its final velocity?
3. A body moves with a uniform acceleration of 4 m/s^2. If its initial velocity is 10 m/s, what is its displacement in 6 seconds?
4. A train moves with a uniform acceleration of 0.5 m/s^2. If its initial velocity is 10 m/s, what is the distance travelled by the train in 30 seconds?
5. A particle is moving along a straight line with an initial velocity of 20 m/s. If it covers a distance of 100 m in t seconds, what is its acceleration in terms of t?