Physics - ICS Part 1 Physics Chapter 3 Short Questions Test

Q1. At what point or points in its path does a projectile have its minimum speed,its maximum speed?

Ans 1: The speed of the projectile is minimum at the maximum height of projectile. It is because of the reason that; at maximum height the vertical component of velocity becomes zero.
The speed of the projectile is maximum at the point of projection and also just before it strikes the ground because the vertical component of velocity is maximum at these points.

Q2. Differentiate between distance and displacement.

Ans 1:

Q3. Find a relation for magnitude of velocity of projectile and direction of projectile?

Ans 1:

Q4. Write two object?

Ans 1: Velocity time graph can be used to

1. Calculate the distance covered by the body .
2. Find the instantaneous acceleration of the body.

Q5. How is the distance calculated from velocity time graph?

Ans 1: Area under the velocity time graph line is equal to the distance covered by the body.

Q6. What is ballistic missile? Define ballistic trajectory.

Ans 1: The missile in which it is given an initial push and is then allowed to move freely due to inertia and under the action of gravity is called ballistic and the path followed by such a projectile is called ballistic trajectory.

Q7. Define momentum and write down its unit.

Ans 1:

Q8. Under what condition, the instantaneous and average velocities of a moving object become equal?

Ans 1: For a body moving with uniform velocity, its average and instantaneous velocities are equal.

Q9. Can the velocity of an object reverse the direction when acceleration is constant? If so, given an example.

Ans 1: Yes, the velocity of a body can reverse its direction with constant acceleration For example, when a body is thrown vertically upward under the action of gravity, the velocity of the object will go on decreasing because force of gravity is acting downward. When the object reaches the maximum height , its velocity becomes zero, and then the object reverses its direction of motion and start moving vertically downward.During the whole process, the magnitude of the acceleration due to gravity remains constant.

Q10. Define Force? Define its SI unit ?

Ans 1: A Force is an agent which stops a moving body try to stop a moving body (or) which moves a stationary body (or) try to move stationary The Product of mass and accelerations known as force

F = ma

Unit of force:

F= ma = kg m/sec^{2}So the unit of force is Newton, Which is define as,

Force is said to be 1 newton ,if it moves a body of mass 1 kg with acceleration of 1m/sec^2,

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