CLASS -9 PHYSICS

CHAPTER-8 MOTION WK-3

Uniform Motion

When an object covers equal distance in equal intervals of time.E.g:car travelling 2km in 2 min,2km in another 2 min.

Non Uniform Motion

When an object covers unequal distances in equal interval of time. E.g : car moving in a crowded street.

Q2) What does the path of an object look when it is in uniform motion?

A2) The path of an object will be a straight line when it is in uniform motion.

SPEED

Distance travelled by the object in unit time.It is a scalar quantity.It is always positive or zero but can never be negative.It can be changed by changing the distance travelled by a body in a particular time.

VELOCITY

Velocity is the speed of an object moving in definite direction. It is a vector quantity.It may be positive,negative or zero.It can be changed by changing the speed of a body.Unit- m/s.

Acceleration

Rate of change of velocity with time(vector quantity)

S.I unit : m/ s^2.

Uniform Acceleration

Velocity of an object increases or decreases by equal amounts in equal interval of time.

Non- Uniform Acceleration

Velocity of an object increases or decreases by unequal amounts in equal interval of time.

Motion along straight line

1) The actual path traversed by a body is its distance(scalar quantity)
2) The shortest straight distance between the initial and final positions of a body is its displacement(vector quantity)

Motion along circular path

1) When moving in a circular path with uniform speed,it is said to be uniform circular motion.
2) Direction changes continuously.

EQUATION OF MOTION

VELOCITY- TIME RELATION (FIRST EQUATION OF MOTION)

$v = u + at$

Q 3) A bus decreases its speed from 80 km/hr to 60 km/hr in 5 sec.Find the acceleration of the bus.

Q4) A train starting from a railway station and moving with uniform acceleration attains a speed of 40 km/hr in 10 minutes. Find the acceleration.

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