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SUBJECT:- PHYSICS CLASS:- IXTH DATE:-20/04/XXI

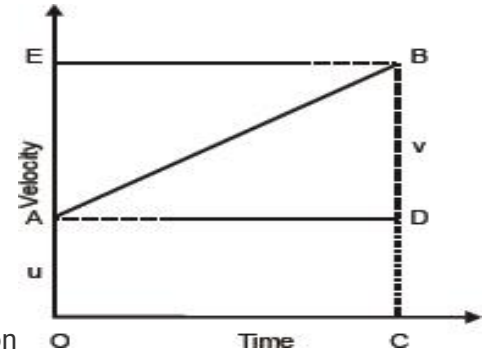
SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 1. (MOTION)(BASED ON NCERT PATTERN)

3rd Equation for position-velocity relation:

s = distance travelled by the object

t = in time t



a = moving with uniform acceleration

s = area enclosed by trapezium OABC

$$\therefore s = \frac{(OA + BC) \times OC}{2}$$

$\therefore$ OA = u, BC = v and OC = t.

$$\therefore s = \frac{(u + v)t}{2} \quad ...(1)$$

$$\text{Slope } t = \frac{v - u}{a} \text{ from the graph } ...(2)$$

Substitute value of 't' in (1)

$$\therefore s = \frac{v + u}{2} \times \frac{(v - u)}{a}$$

$$s = \frac{v^2 - u^2}{2a}$$

$$\therefore v^2 - u^2 = 2ac$$

- **Uniform circular motion:** When a body moves in a circular path with uniform speed, its motion is called uniform circular motion