QUES 4

A particle is moving eastwards with a velocity of 5 m/s. In 10s the velocity changes to 5 m/s northwards. The average acceleration in this time is/are [1982 - 3 Marks]

(a) zero

(b) $1/\sqrt{2}$ m/s^2 towards north-west

(c) $1/\sqrt{2}$ m/s^2 towards north-east

(d) $\frac{1}{2} m/s^2$ towards north-west

(e) $\frac{1}{2} m/s^2$ towards north

(2R, πR) Displacement = shortest distance

$= AB = AOB = 2R$

Distance = Path length

$= ACB = \frac{2\pi r}{2} = \pi R$