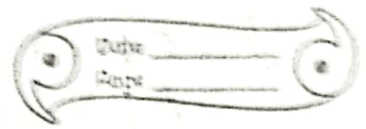


Heme



① (b) Acceleration is uniform

② The distance travelled by A is calculated as $s_A = 10t$ (velocity is given as 10m/s) and that of B is calculated as

$$s_B = \frac{1}{2}at^2$$

$$s_A + 10.5 = \frac{1}{2}t^2$$

Thus we get the equation as

$$10.5 + 10t = \frac{1}{2}at^2$$

$$t^2 - 20t - 21 = 0$$

$$t = \frac{20 \pm \sqrt{400 + 84}}{2}$$

$$t = 21 \text{ sec.}$$

3 (A) - (S)

(B) - (R)

(C) - (P)

(D) - (Q)

④ (a) A-B = uniform motion

B-C = non uniform moving

(b) A to B as the body moves with constant speed of 40 km/hr.

(c) B-C.

5. (i) OA = Non uniform motion
AB = uniform motion

(ii) $10s = 20m/s$

$40s = 0m/s$

(iii) ~~$3m/s^2$ acceleration~~ = $\frac{\Delta v}{\Delta t} = 3m/s^2$

(iv) $20m$