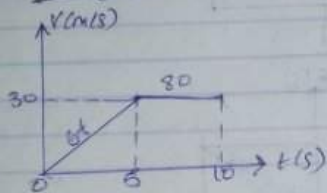
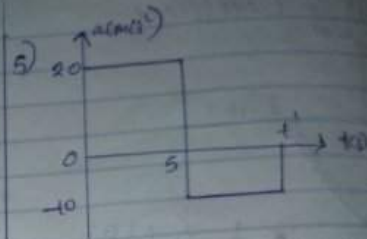
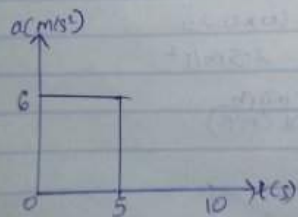


i)  $V = \frac{ds}{dt}$   
 at  $t = 5s$   
 $V = 6t = 6 \times 5$   
 $= 30 \text{ m/s}$   
 at  $t = 10s$   
 $V = 30 \text{ m/s}$

V-t graph

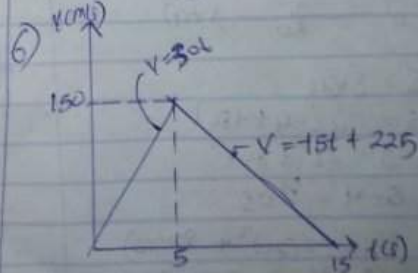
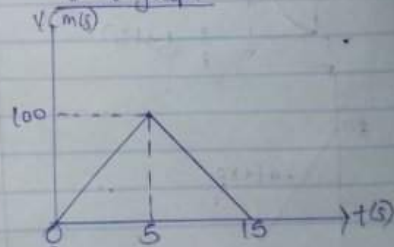


ii)  $a = \frac{dv}{dt}$   
 at  $t = 5s$   
 $a = 6 \text{ m/s}^2$   
 at  $t = 10s$   
 $a = 0 \text{ m/s}^2$



i)  $V = \int a dt$   
 $V = \int 20 dt$   
 at  $t = 5s$   
 $V = 20 \times 5 = 100 \text{ m/s}$   
 $5s \leq t \leq 10s$   
 $\int_{100}^V dv = \int_{5}^t -10 dt$   
 $V - 100 = -10t \Big|_5^t$   
 $V - 100 = -10t + 50$   
 at  $t', V = 0$   
 $0 - 100 = -10t' + 50$   
 $10t' = 150$   
 $t' = 15s$

V-t graph



$$0 \leq t \leq 5s$$

$$v = 30t$$

$$\int_0^5 ds = \int_0^5 30t dt$$

$$s = 15t^2 \Big|_0^5$$

$$s = 15(5)^2 - 15(0)^2$$

$$s = 15 \times 25$$

$$s = 375m$$

$$5s \leq t \leq 15s$$

$$v = 15t + 225$$

$$\int_{375}^s ds = \int_5^{15} (-15t + 225) dt$$

$$s - 375 = \frac{-15t^2}{2} + 225t \Big|_5^{15}$$

$$s - 375 = \left[ \frac{-15(15^2)}{2} + 225(15) \right] - \left[ \frac{-15(5^2)}{2} + 225(5) \right]$$

$$s - 375 = \left[ \frac{-15 \times 225 + 3375}{2} \right] - \left[ \frac{-15 \times 25 + 1125}{2} \right]$$

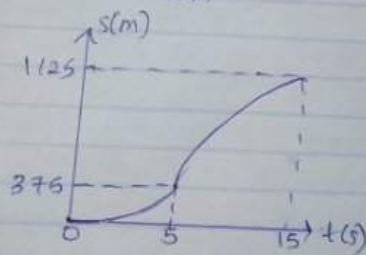
$$s - 375 = (-1687.5 + 3375) - (-187.5 + 1125)$$

$$s - 375 = 1687.5 - 937.5$$

$$s - 375 = 750$$

$$s = 1125m$$

s-t graph



Shot on F6  
Gionee Dual Camera