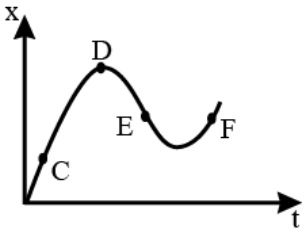
DPP - 3

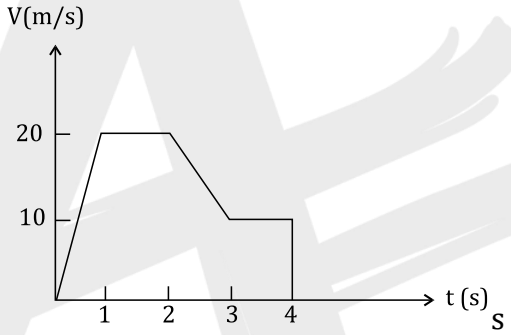
Graph

Q.1 In the displacement-time graph of a moving particle is shown, the instantaneous velocity of the particle is negative at the point :



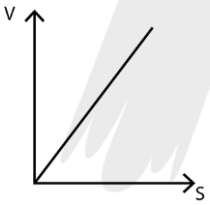
(A) C (B) D (C) E (D) F

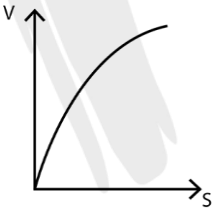
Q.2 The variation of velocity of a particle moving along a straight line is shown in the figure. The distance travelled by the particle in 4 s is:

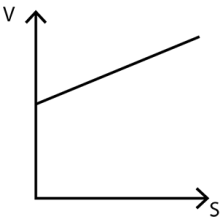


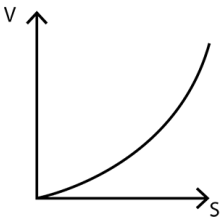
(A) 25 m (B) 30 m (C) 55 m (D) 60 m

Q.3 A particle starts from rest and moves along a straight line with constant acceleration. The variation of velocity v with displacement S is :

(A)


(B)


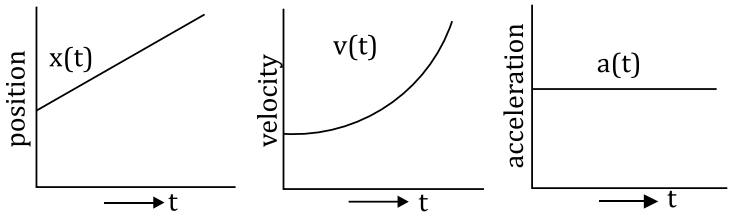
(C)


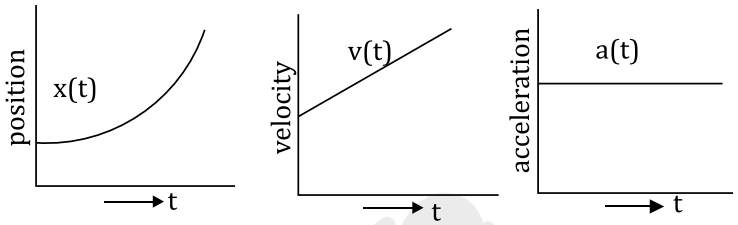
(D)


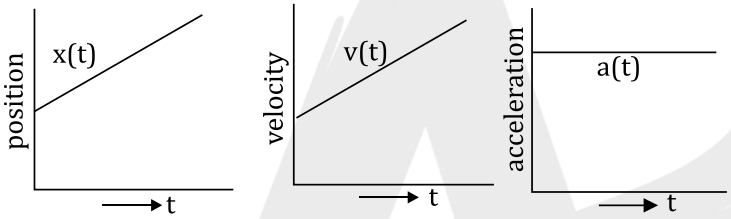
Q.4 The displacement time graphs of two particles A and B are straight lines making angles of respectively 30° and 60° with the time axis. If the velocity of A is V_A and that of B is V_B, then the value of V_A/V_B is

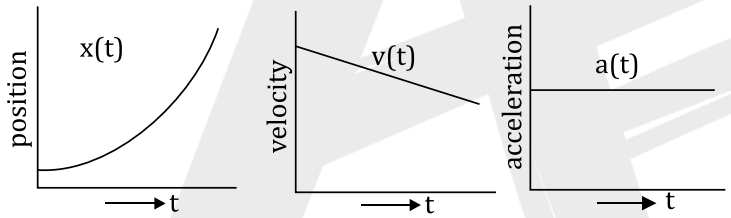
(A) $\frac{1}{2}$ (B) $\frac{1}{\sqrt{3}}$ (C) $\sqrt{3}$ (D) $\frac{1}{3}$

Q.5 The position, velocity and acceleration of a particle moving with a constant acceleration can be represented by

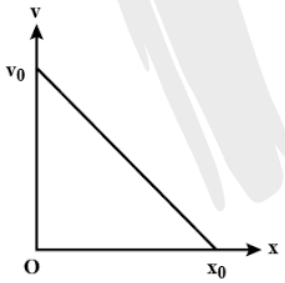
(A) 

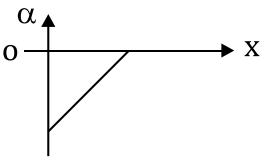
(B) 

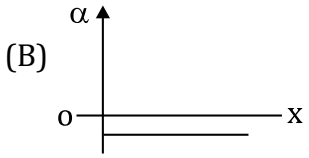
(C) 

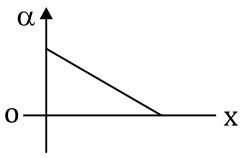
(D) 

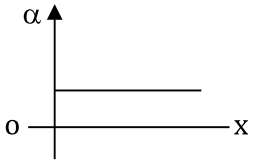
Q.6 The velocity - displacement graph of a particle is shown in the figure. The acceleration – displacement graph of the same particle is represented by



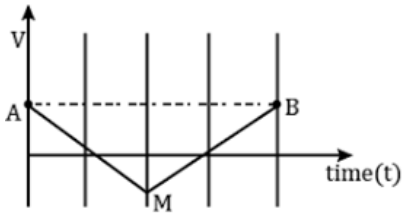
(A) 

(B) 

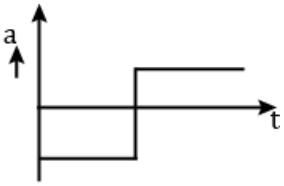
(C) 

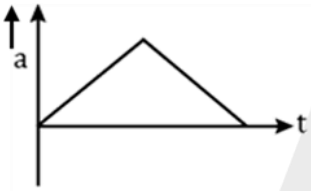
(D) 

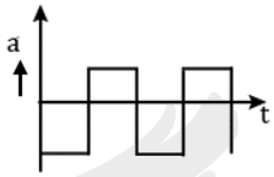
Q.7 If the velocity-time graph has the shape AMB, what would be the shape of the corresponding accelerationtime graph?



(A) 

(B) 

(C) 

(D) 

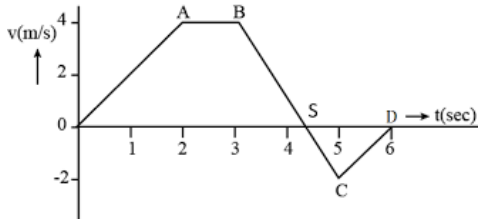
Q.8 The velocity (v) and time (t) graph of a body in a straight line motion is shown in the figure. The point S is at 4.333 seconds. The total distance covered by the body in 6 s is

(A) $\frac{37}{3}$ m

(B) 12 m

(C) 11 m

(D) $\frac{49}{4}$ m



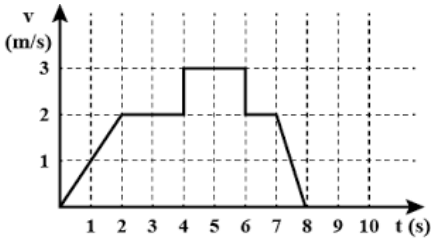
Q.9 A particle starts from the origin at time t = 0 and moves along the positive x-axis. The graph of velocity with respect to time is shown in figure What is the position of the particle at time t = 5 s ?

(A) 9 m

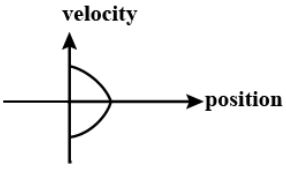
(B) 6 m

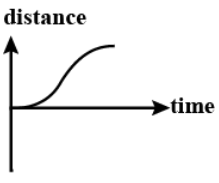
(C) 10 m

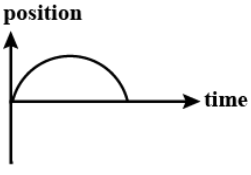
(D) 3 m

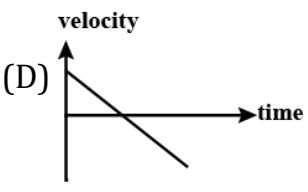


Q.10 All the graphs below are intended to represent the same motion. One of them does it incorrectly. Pick it up.

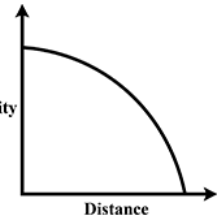
(A) 

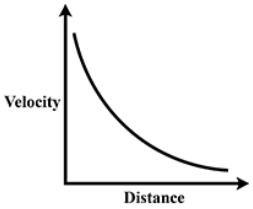
(B) 

(C) 

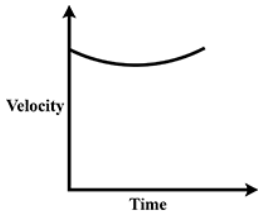
(D) 

Q.11 Which graph corresponds to an object moving with a constant negative acceleration and a positive velocity?

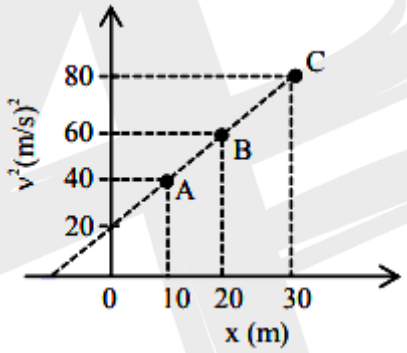
(A) 

(B) 

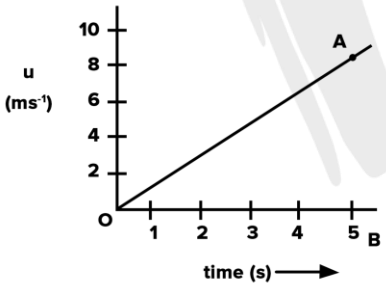
(C) 

(D) 

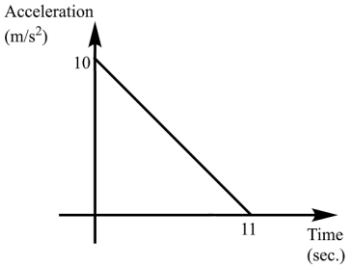
Q.12 A particle is moving with constant acceleration a. Following graph shows v^2 versus x displacement) plot. The acceleration of the particle is m/s^2.



Q.13 The speed versus time graph for a particle is shown in the figure. The distance travelled (in m) by the particle during the time interval t = 0 to t = 5 s will be



Q.14 A body starts from rest at time t = 0, the Acceleration acceleration time graph is shown in the figure. The maximum velocity attained by the body will (m/s^2) be



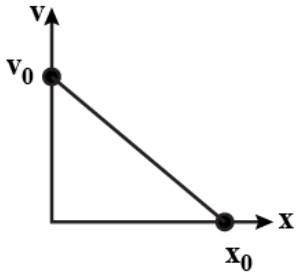
(A) 110 m/s

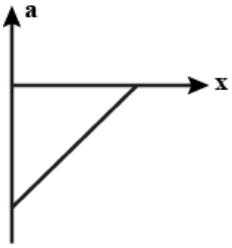
(B) 55 m/s

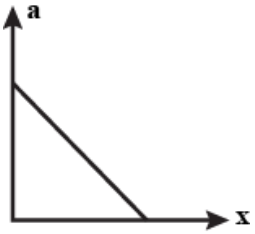
(C) 650 m/s

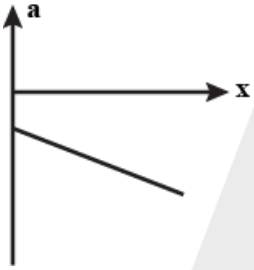
(D) 550 m/s

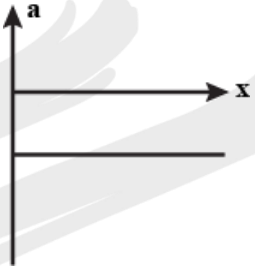
Q.15 The velocity displacement graph of a particle moving along a straight line is shown. The most suitable acceleration-displacement graph will be



(A) 

(B) 

(C) 

(D) 

ANSWER KEY

1.	(C)	**2.**	(C)	**3.**	(B)	**4.**	(D)	**5.**	(A)	**6.**	(A)	**7.**	(B)
8.	(A)	**9.**	(A)	**10.**	(B)	**11.**	(A)	**12.**	(1)	**13.**	(20)	**14.**	(B)
15.	(A)												