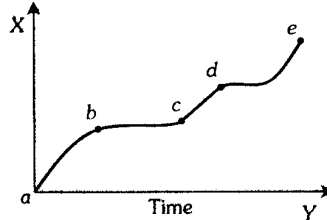


GRAPHICAL INTERPRETATION

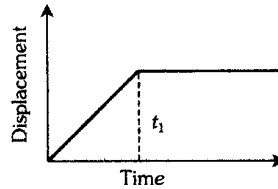
LEVEL # 1

- Q.1** The displacement versus time graph for a body moving in a straight line is shown in figure. Which of the following regions represents the motion when no force is acting on the body-



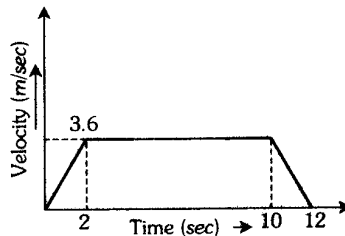
- (A) ab (B) bc (C) cd (D) de

- Q.2** The x-t graph shown in figure represents-



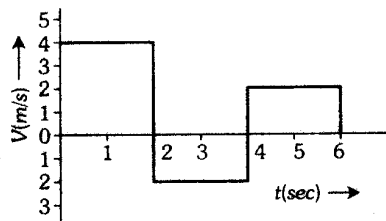
- (A) Constant velocity
 (B) Velocity of the body is continuously changing
 (C) Instantaneous velocity
 (D) The body travels with constant speed upto time t_1 and then stops.

- Q.3** A lift is going up. The variation in the speed of the lift is as given in the graph. What is the height to which the lift takes the passengers ?



- (A) 3.6 m (B) 28.8 m
 (C) 36.0 m (D) Cannot be calculated from the above graph

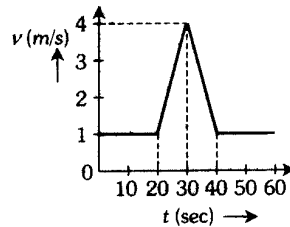
- Q.4** The velocity time graph of a body moving in a straight line is shown in the figure. The displacement and distance travelled by the body in 6 sec are respectively-



- (A) 8m, 16m (B) 16m, 8m (C) 16m, 16m (D) 8m, 8m

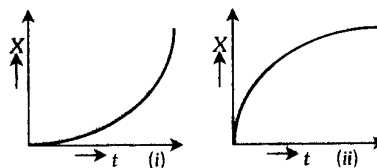
GRAPHICAL INTERPRETATION

- Q.5** Velocity-time (v-t) graph for a moving object is shown in the figure. Total displacement of the object during the time interval when there is non-zero acceleration and retardation is-



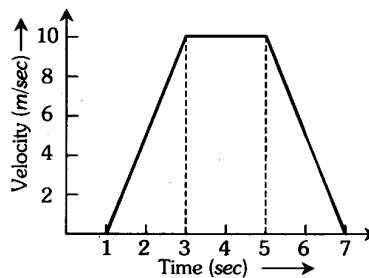
- (A) 60m (B) 50m (C) 30m (D) 40m

- Q.6** Figures (i) and (ii) below show the displacement-time graphs of two particles moving along the x-axis. We can say that-



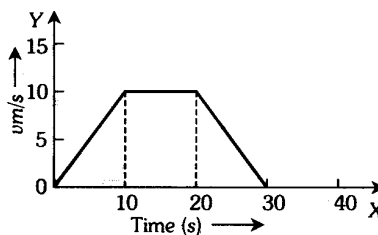
- (A) Both the particles are having a uniformly accelerated motion.
 (B) Both the particles are having a uniformly retarded motion.
 (C) Particle (i) is having a uniformly accelerated motion while particle (ii) is having a uniformly retarded motion.
 (D) Particle (i) is having a uniformly retarded motion while particle (ii) is having a uniformly accelerated motion.

- Q.7** For the velocity-time graph shown in figure below, the distance covered by the body in last two seconds of its motion is what fraction of the total distance covered by it in all the seven seconds-



- (A) $\frac{1}{2}$ (B) $\frac{1}{4}$ (C) $\frac{1}{3}$ (D) $\frac{2}{3}$

- Q.8** In the following graph, distance travelled by the body in metres is-

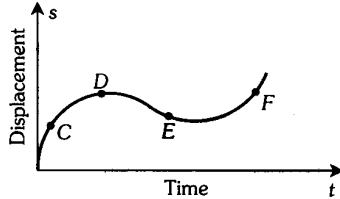


- (A) 200 (B) 250 (C) 300 (D) 400

GRAPHICAL INTERPRETATION

Q.9 Velocity-time curve for a body projected vertically upwards is-
 (A) Parabola (B) Ellipse (C) Hyperbola (D) Straight line

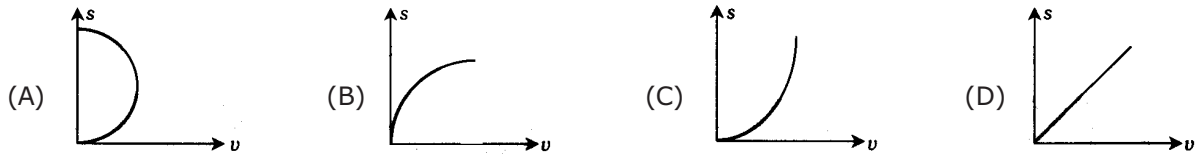
Q.10 The displacement-time graph of moving particle is shown below-



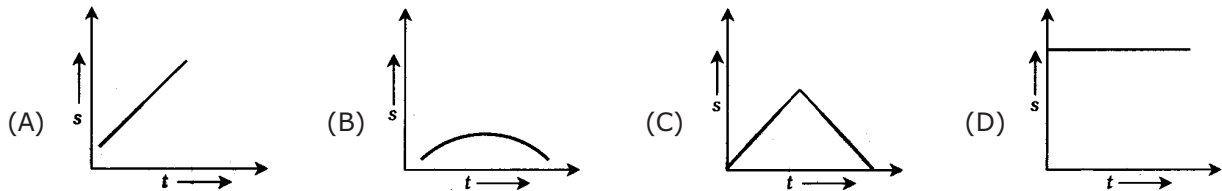
The instantaneous velocity of the particle is negative at the point-

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

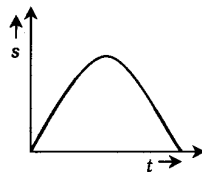
Q.11 An object is moving with a uniform acceleration which is parallel to its instantaneous direction of motion. The displacement(s) - velocity (v) graph of this object is-



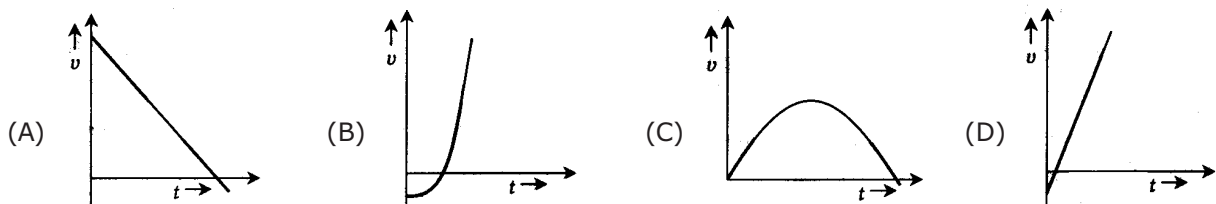
Q.12 Which of the following graphs represent uniform motion-



Q.13 The graph of displacement v/s time is

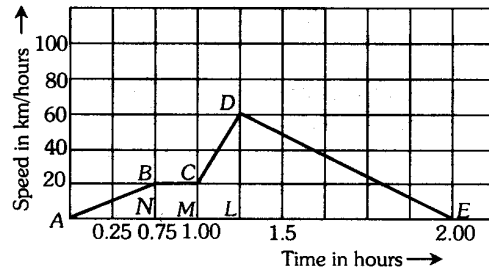


Its corresponding velocity-time graph will be-



GRAPHICAL INTERPRETATION

Q.14 A train moves from one station to another in 2 hours time. Its speed-time graph during this motion is shown in the figure. The maximum acceleration during the journey is-

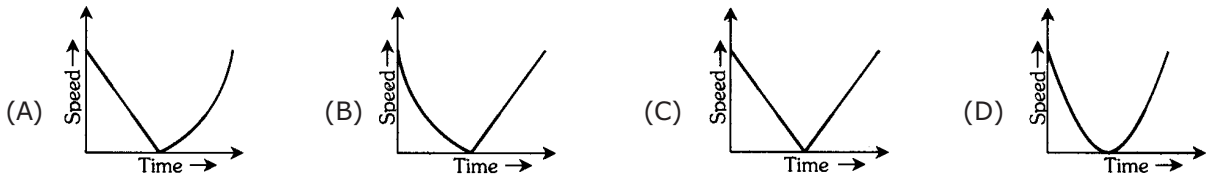


- (A) 140 km h^{-2} (B) 160 km h^{-2} (C) 100 km h^{-2} (D) 120 km h^{-2}

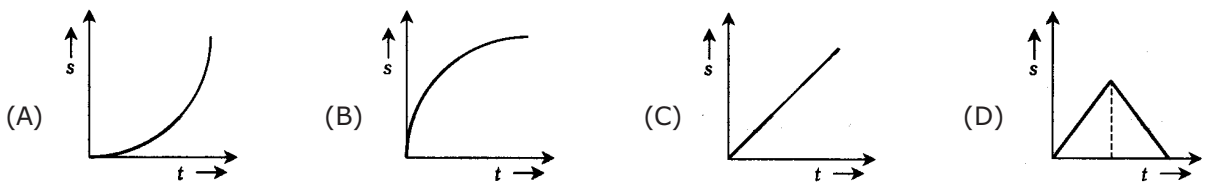
Q.15 The area under acceleration time graph gives-

- (A) Distance travelled (B) Change in acceleration
(C) Force acting (D) Change in velocity

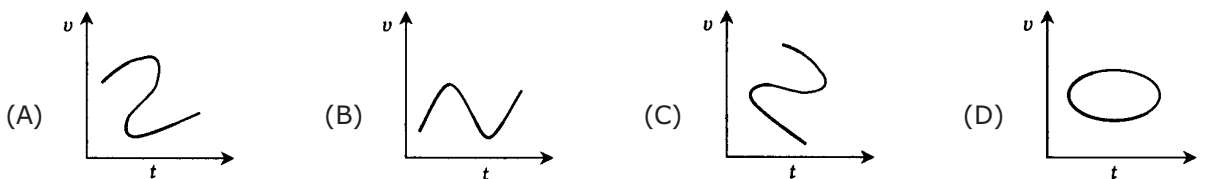
Q.16 A ball is thrown vertically upwards. Which of the following plots represents the speed-time graph of the ball during its height if the air resistance is not ignored ?



Q.17 Which graph represents the uniform acceleration ?

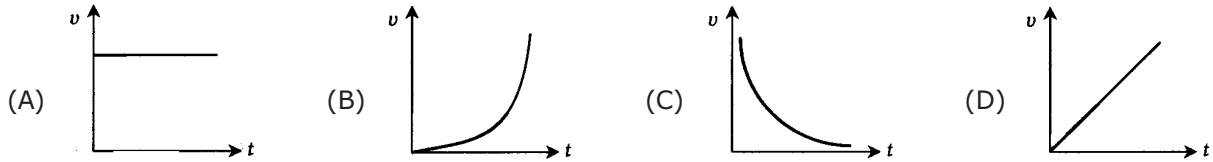


Q.18 Which of the following velocity time graphs shows a realistic situation for a body in motion?

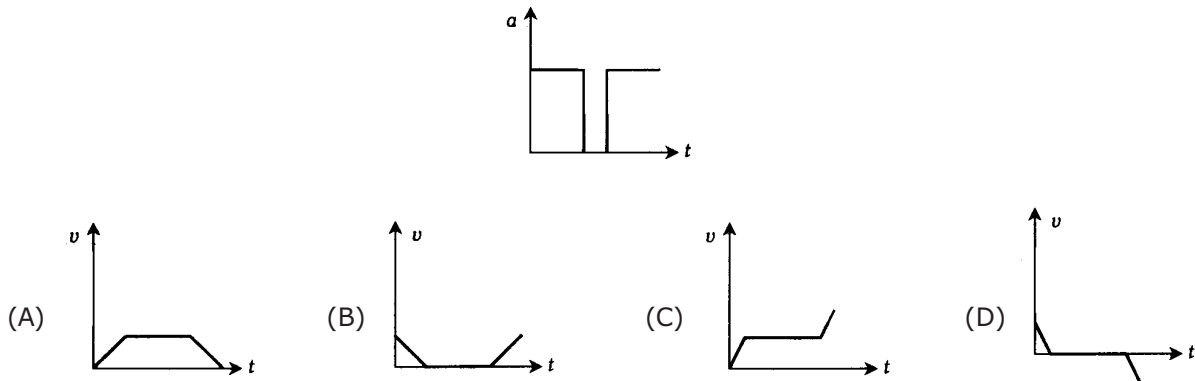


GRAPHICAL INTERPRETATION

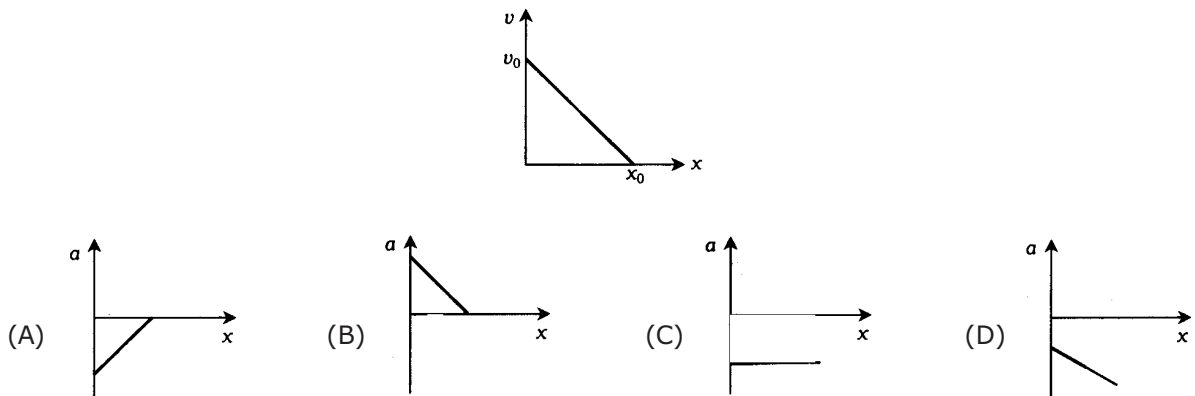
Q.19 Which of the following velocity-time graphs represents uniform motion ?



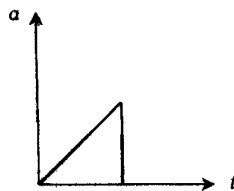
Q.20 Acceleration-time graph of a body is shown. The corresponding velocity-time graph of the same body is-



Q.21 The given graph shows the variation of velocity with displacement. Which one of the graph given below correctly represents the variation of acceleration with displacement ?

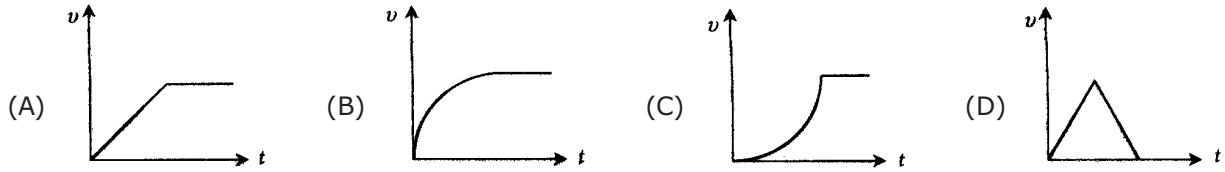


Q.22 The acceleration-time graph of a body is shown below

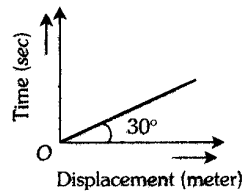


GRAPHICAL INTERPRETATION

The most probable velocity-time graph of the body is-

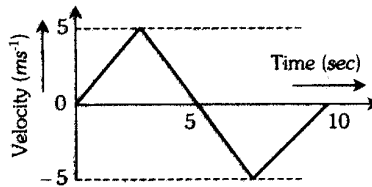


Q.23 From the following displacement-time graph, find out the velocity of a moving body-

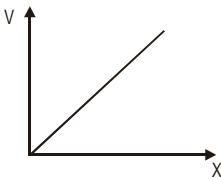


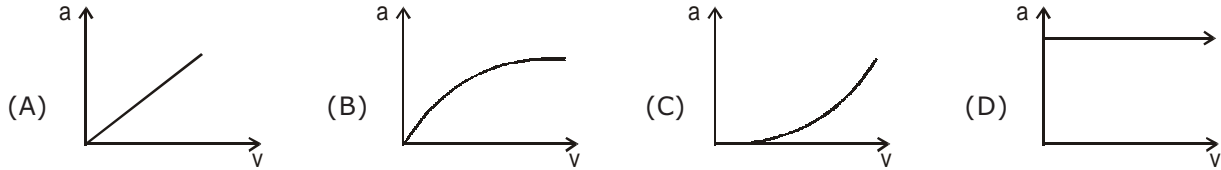
- (A) $\frac{1}{\sqrt{3}}$ m/s (B) 3 m/s (C) $\sqrt{3}$ m/s (D) $\frac{1}{3}$ m/s

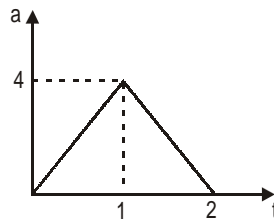
Q.24 The v-t plot of a moving object is shown in the figure. The average velocity of the object during the first 10 seconds is-



- (A) 0 (B) 2.5 ms^{-1} (C) 5 ms^{-1} (D) 2 ms^{-1} .

Q.1 Given v-x graph  which of the following graphs represents (a - v) graph



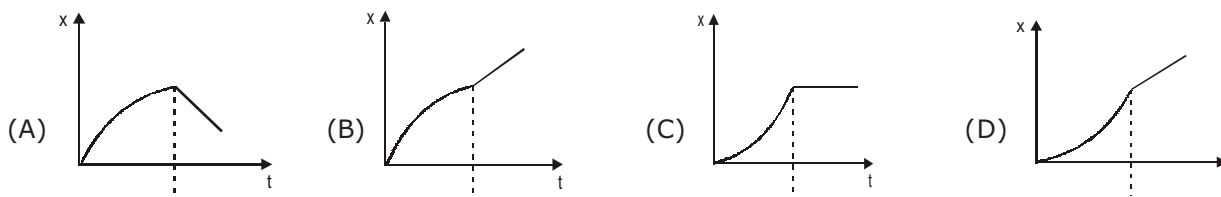
Q.2  If initial velocity $V_0 = 2$ m/s then find velocity after 2 sec. ?

- (A) 6 (B) 4 (C) 2 (D) 8

Q.3 From a tower one stone is dropped and other stone is thrown vertically upward simultaneous. Which of the following graphs gives correct relation between s and t where s = distances between them before either stone hits the ground-

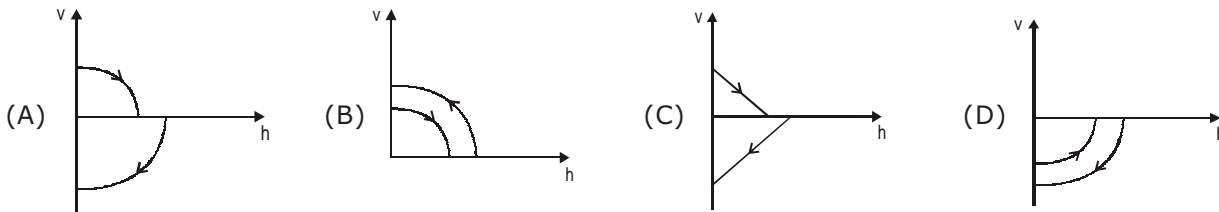


Q.4 A car accelerates uniformly for some time and then moves with uniform velocity. Which represents x-t graph.

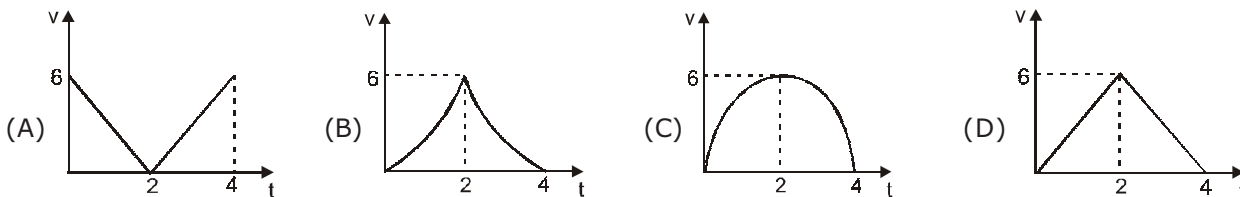
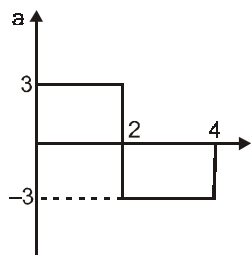


GRAPHICAL INTERPRETATION

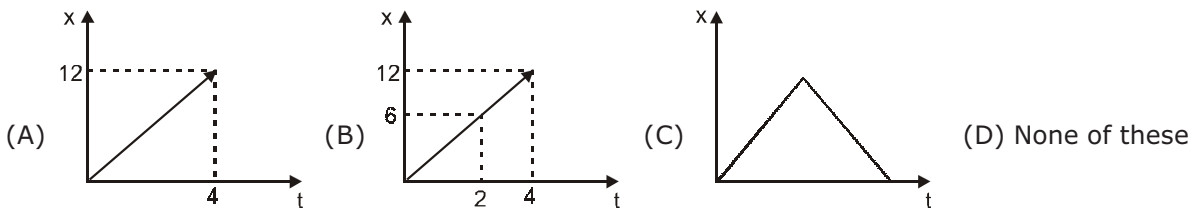
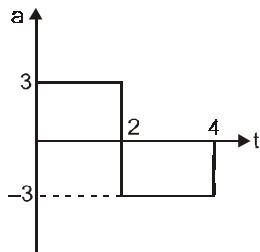
Q.5 A ball is dropped from h which rebound upto $h/2$. v varies with height h as.



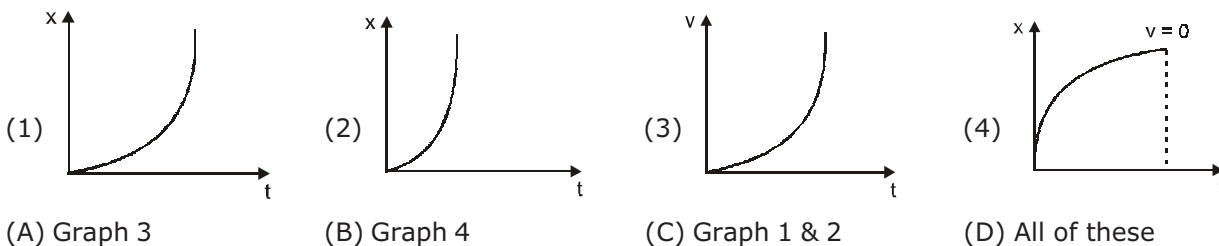
Q.6 If $(a - t)$ graph is



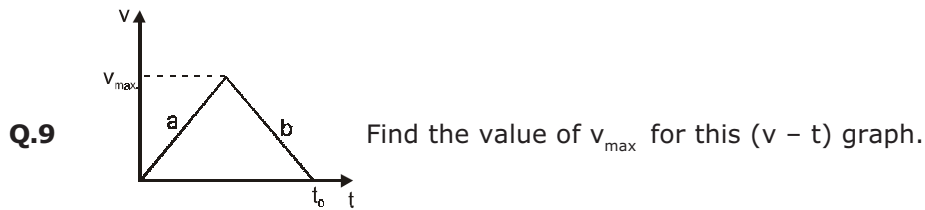
Q.7 If $(a - t)$ graph is



Q.8 Which of the following graphs represents non-uniform motion.

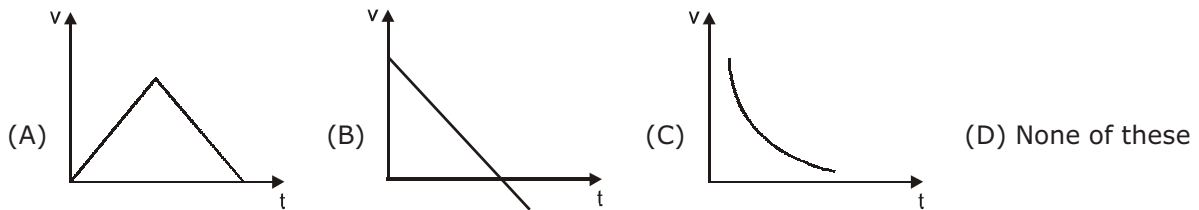


GRAPHICAL INTERPRETATION

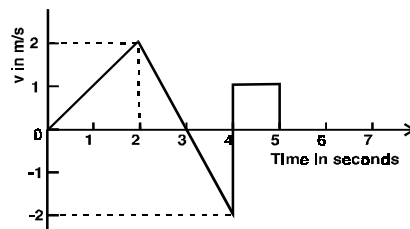


- (A) $\frac{ab t_0}{a+b}$ (B) $ab t_0$ (C) $\frac{ab t_0}{a-b}$ (D) $\frac{a+b t_0}{ab}$

Q.10 Which represents correct ($v - t$) graph for ball thrown vertically upward

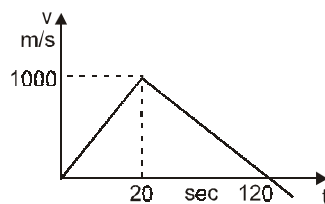


Q.11 Find the value of distance covered and displacement in 5 sec for the following graph



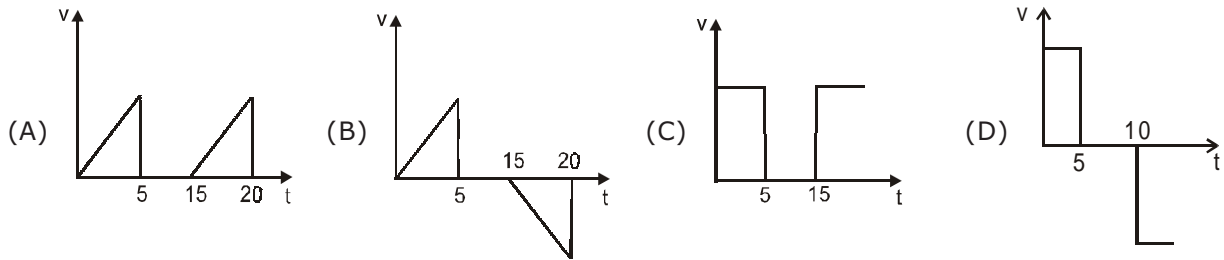
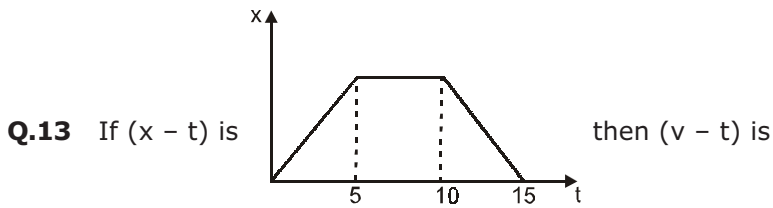
- (A) 5, 3 (B) 3, 5 (C) 5, 5 (D) 3, 3

Q.12 The ($v - t$) graph for a rocket projected vertically upward is given below. Find maximum height attained by rocket.

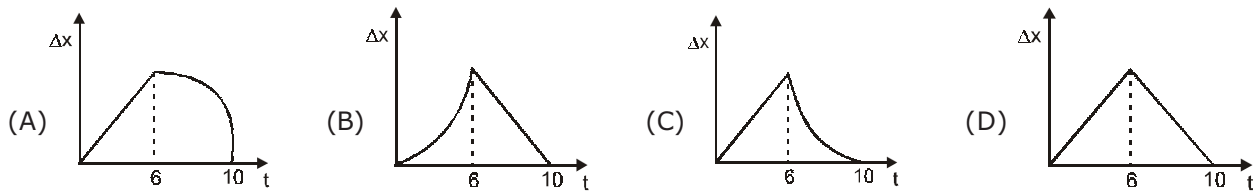


- (A) 120 km (B) 80 km (C) 60 km (D) 30 km

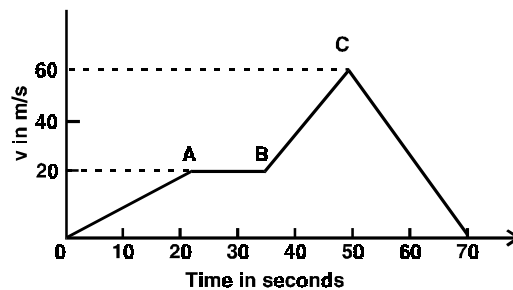
GRAPHICAL INTERPRETATION



Q.14 Two stones simultaneous thrown upward with $u_2 > u_1$. First stone reaches the ground at $t_1 = 6$ sec, second stone reaches the ground at $t_2 = 10$ sec. The correct Δx vs t graph upto 10 sec assuming stones do not rebound will be.
(Δx is the distance between the stones)



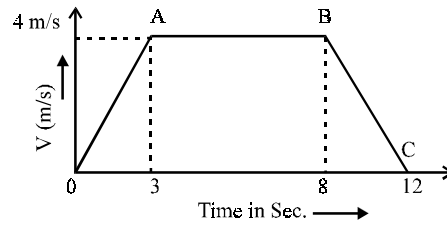
Q.15 The velocity-time graph of a body is given below. The maximum acceleration in m/s^2 is-



- (A) 4 (B) 3 (C) 2 (D) 1

GRAPHICAL INTERPRETATION

Q.16 From the velocity-time graph of a particle moving in a straight line, one can conclude that:



- (A) Its average velocity during the 12 seconds interval is $24/7$ m/s
- (B) Its velocity for the first 3 seconds is uniform and is equal to 4 m/s
- (C) The body has a constant acceleration between $t = 8$ s to $t = 12$ s
- (D) The body has a uniform retardation from $t = 8$ s to $t = 12$ s.

ANSWER KEY**LEVEL # 1**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	C	D	C	A	B	C	B	A	D	D	C	A	A	B	D
Que.	16	17	18	19	20	21	22	23	24						
Ans.	C	A	B	A	C	A	C	C	A						

LEVEL # 2

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	A	B	A	D	A	D	D	D	A	B	A	C	D	A	A
Que.	16														
Ans.	D														