Yakeen NEET 2.0 2026

Physics by MR Sir

Motion in a Straight Line

DPP: 5

Q1 A particle starts with an $u = 2.5\ \mathrm{m/s}$ along the positive x direction and accelerates with $0.50\ \mathrm{ms^{-2}}$. Time taken to reach the velocity $7.5\ \mathrm{m/s}$ will be
(A) $5\mathrm{sec}$
(B) $2\mathrm{sec}$
(C) $10\mathrm{sec}$
(D) $15\mathrm{sec}$

Q2 A car starts from rest and accelerates uniformly at $2\ m/s^2$ What is the velocity of the car after 5 seconds?
(A) 2 m/s (B) 5 m/s
(C) 10 m/s (D) 15 m/s

Q3 A body starts from rest and accelerates uniformly. If the acceleration is $4\ \mathrm{m/s^2}$, how much time will it take to reach a velocity of $20\ \mathrm{m/s}$?
(A) 5 seconds (B) 4 seconds
(C) 10 seconds (D) 8 seconds

Q4 An object moves with uniform acceleration and covers 100 meters in 4 seconds. If the initial velocity is 0 , what is the acceleration?
(A) $5\ \mathrm{m/s^2}$
(B) $12.5\ \mathrm{m/s^2}$
(C) $15.5\ \mathrm{m/s^2}$
(D) $20\ \mathrm{m/s^2}$

Q5 A car moves with a velocity of $20\ \mathrm{m/s}$ and a constant acceleration of $2\ \mathrm{m/s2}$. How far will it travel in 10 seconds?
(A) 100 meters (B) 150 meters
(C) 300 meters (D) 250 meters

Q6 A particle moves in a straight line with a constant acceleration. It changes its velocity from 10 ms^{-1} to 20 ms^{-1} while passing through a distance 135 m in t sec. The value of t is;
(A) 10 (B) 1.8
(C) 12 (D) 9

Q7 The ratio of the distance traveled by a freely falling body in the 1^{st} , 2^{nd} , 3^{rd} and 4^{th} second :
(A) $1:1:1:1$ (B) $1:2:3:4$
(C) $1:4:9:16$ (D) $1:3:5:7$

Answer Key

Q1	(C)
Q2	(C)
Q3	(A)
Q4	(B)
Q5	(C)
Q6	(D)
Q7	(D)