Yakeen NEET 2.0 2026

Physics by MR Sir

DPP: 8

Motion in a Straight Line

Q1 Velocity of a body on reaching the point from which it was projected upwards, is

(A) $v = 0$ (B) $v = 2u$

(C) $v = 0.5u$ (D) $v = u$

Q2 A body is projected vertically upward with speed 40 m/s. The distance travelled by body in the last second of upward journey is [Take g = 9.8 m/s^2 and neglect effect of air resistance]

(A) 4.9 m (B) 9.8 m

(C) 12.4 m (D) 19.6 m

Q3 A body is released from the top of a tower of height H metres. It takes t time to reach the ground. Where is the body $\frac{t}{2}$ time after the release

(A) At $\frac{H}{2}$ metres from ground

(B) At $\frac{H}{4}$ metres from ground

(C) At $\frac{3H}{4}$ metres from the ground

(D) At $\frac{H}{6}$ metres from the ground.

Q4 Drops of water fall from the roof of a building $18\ \text{m}$ high at regular intervals of time. When the first drop reaches the ground, at the same instant fourth drop begins to fall. What are the distances of the second and third drops from the roof?

(A) $7\ \text{m}$ and $3\ \text{m}$

(B) $8\ \text{m}$ and $2\ \text{m}$

(C) $8\ \text{m}$ and $4\ \text{m}$

(D) $10\ \text{m}$ and $4\ \text{m}$

Q5 An iron ball and a wooden ball of same radii are released from a height h in vacuum then time taken by both of them to reach ground will be:

(A) Unequal (B) Roughly equal

(C) Exactly equal (D) Zero

Q6 A body dropped from the top of a tower covers a distance $7x$ in the last second of its journey, where x is the distance covered in first second. How much time does it take to reach the ground?

(A) $3\ \text{s}$

(B) $4\ \text{s}$

(C) $5\ \text{s}$

(D) $6\ \text{s}$

Q7 A stone thrown upwards with a speed u from the top of the tower reaches the ground with a velocity 3u.The height of the tower is:

(A) $\frac{4u^2}{g}$

(B) $\frac{4u^3}{2g}$

(C) $\frac{8u^2}{g}$

(D) $\frac{7u^2}{g}$

Q8 A stone is dropped from the top of the tower. Its speed after it has fallen $20\ \text{m}$ is [Take $g = 10\ \text{ms}^{-2}$]

(A) $-10\ \text{ms}^{-1}$

(B) $10\ \text{ms}^{-1}$

(C) $-20\ \text{ms}^{-1}$

(D) $20\ \text{ms}^{-1}$

Q9 Object is dropped then find velocity after 5sec.

(A) $50\ \text{m/s}$

(B) $30\ \text{m/s}$

(C) $60\ \text{m/s}$

(D) $10\ \text{m/s}$

Q10

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Object is dropped then find displacement of object in 4^{th} sec

(A) $25\ \text{m}$

(B) $80\ \text{m}$

(C) $28\ \text{m}$

(D) $35\ \text{m}$

Q11 Two balls are dropped from heights h and $2h$ respectively from the earth surface. The ratio of time taken by these balls to reach the earth is

(A) $1 : \sqrt{2}$

(B) $\sqrt{2} : 1$

(C) $2 : 1$

(D) $1 : 4$

Q12 Object is dropped from a height 80 m from ground, find its time of flight.

(A) $4\ \text{sec}$

(B) $5\ \text{sec}$

(C) $3.5\ \text{sec}$

(D) $8\ \text{sec}$

Q13 A body dropped from top of a tower falls through 40 m during the last two seconds of its fall. The height of tower is $\left(g = 10\ \text{m/s}^2\right)$

(A) $60\ \text{m}$

(B) $45\ \text{m}$

(C) $80\ \text{m}$

(D) $50\ \text{m}$

Q14 What will be the ratio of the distance moved by a freely falling body from rest in 4^{th} and 5^{th} seconds of journey?

(A) $4 : 5$ (B) $7 : 9$

(C) $16 : 25$ (D) $1 : 1$

Q15 A stone dropped from the top of the tower touches the ground in $4\ \text{sec}$. The height of the tower is about

(A) $80\ \text{m}$

(B) $40\ \text{m}$

(C) $20\ \text{m}$

(D) $160\ \text{m}$

Q16 A stone is dropped from a height of 80 meters. The time taken by the stone to reach the ground is approximately:

(A) 4 seconds (B) 5 seconds

(C) 6 seconds (D) 8 seconds

Q17 A balloon starts rising from ground with an acceleration of $1.25\ \text{m/sec}^2$. After 8 seconds a stone is released from the balloon. The maximum height from the ground reached by stone will be

(A) $40\ \text{m}$

(B) $50\ \text{m}$

(C) $45\ \text{m}$

(D) $55\ \text{m}$

Answer Key

Q1	(D)
Q2	(A)
Q3	(C)
Q4	(B)
Q5	(C)
Q6	(B)
Q7	(A)
Q8	(D)
Q9	(A)
Q10	(D)
Q11	(A)
Q12	(A)
Q13	(B)
Q14	(B)
Q15	(A)
Q16	(A)
Q17	(C)

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