3 Lecture - PHY101

Important Mcqs

A car moves in a circular path of radius 100 meters with a constant speed of 10 m/s. What is the magnitude of the centripetal acceleration of the car?

A. 1 m/s^2

B. 10 m/s^2

C. 100 m/s^2

D. 1000 m/s^2

Answer: B. 10 m/s^2

A ball is thrown horizontally from the top of a cliff with a speed of 20 m/s. If the cliff is 50 meters high, how far from the base of the cliff will the ball hit the ground?

A. 100 m

B. 150 m

C. 200 m

D. 250 m

Answer: C. 200 m

A person is standing at the edge of a cliff and throws a ball with a velocity of 30 m/s at an angle of 60 degrees with the horizontal. What is the horizontal component of the velocity of the ball?

A. 15 m/s

B. 25 m/s

C. 30 m/s

D. 35 m/s

Answer: A. 15 m/s

A car is traveling at a speed of 20 m/s and comes to a complete stop in 5 seconds. What is the magnitude of its acceleration?

A. 4 m/s^2

B. 5 m/s^2

C. 10 m/s^2

D. 20 m/s^2

Answer: C. 10 m/s^2

A ball is thrown vertically upwards with a speed of 20 m/s. What is the maximum height reached by the ball?

A. 20 m

B. 40 m

C. 80 m

D. 160 m

Answer: B. 40 m

A train is moving with a velocity of 40 m/s. If the train accelerates uniformly at 4 m/s^2 for 10 seconds, what is the final velocity of the train?

A. 80 m/s

B. 60 m/s

C. 50 m/s

D. 44 m/s

Answer: B. 60 m/s

A car starts from rest and accelerates uniformly at 5 m/s^2 for 10 seconds. What is the distance traveled by car?

A. 125 m

B. 250 m

C. 500 m

D. 1000 m

Answer: C. 500 m

A stone is thrown from the top of a building with an initial velocity of 20 m/s at an angle of 30 degrees with the horizontal. What is the range of the stone?

A. 20 m

B. 40 m

C. 60 m

D. 80 m

Answer: C. 60 m

A rocket is launched vertically upwards with an initial velocity of 100 m/s. What is the maximum height reached by rocket?

A. 5000 m

B. 10000 m

C. 15000 m

D. 20000 m

Answer: D. 20000 m

A ball is thrown horizontally from the top of a building with a velocity of 10 m/s. If the building is 100 meters high, how far from the base of the building will the ball hit the ground?

A. 10 m

B. 20 m

C. 50 m

D. 100 m

Answer: C. 50 m