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Exam Type: Mid Term
Paper Type: chapterwise
Duration: 60 mins
Total Marks: 100
Total Questions: 20

Instructions:
write yourself

Subject: Physics
Chapter: Motion
School: delhi public school

Question: What is the SI unit of displacement?
Answer: undefined
Correct Answer: Meter

Question: Define uniform motion.
Answer: undefined
Correct Answer: Motion with constant velocity.

Question: A car travels 100 meters in 10 seconds. What is its average speed?
Answer: undefined
Correct Answer: 10 m/s

Question: What is the difference between speed and velocity?
Answer: undefined
Correct Answer: Speed is the magnitude of velocity. Velocity is speed with direction.

Question: What does the slope of a distance-time graph represent?
Answer: undefined
Correct Answer: Velocity

Question: Define acceleration.
Answer: undefined
Correct Answer: The rate of change of velocity with respect to time.

Question: A ball is thrown vertically upwards. What is its velocity at the highest point?
Answer: undefined
Correct Answer: Zero

Question: What does a negative acceleration indicate?

Answer: undefined
Correct Answer: Deceleration or retardation.

Question: State the equations of motion.
Answer: undefined
Correct Answer: v = u + at; s = ut + 1/2 at^2; v^2 = u^2 + 2as

Question: What is the acceleration due to gravity?
Answer: undefined
Correct Answer: 9.8 m/s^2

Question: Explain the concept of uniform circular motion. Is it accelerated motion?
Answer: undefined
Correct Answer: Motion in a circular path with constant speed. Yes, it's accelerated motion due to continuous change in direction.

Question: Differentiate between distance and displacement.
Answer: undefined
Correct Answer: Distance is the total path length. Displacement is the shortest distance between initial and final points.

Question: A car accelerates from 10 m/s to 20 m/s in 5 seconds. Calculate its acceleration.
Answer: undefined
Correct Answer: 2 m/s^2

Question: A body is thrown vertically upwards with a velocity of 20 m/s. Find the maximum height it reaches. (Take g = 10 m/s^2)
Answer: undefined
Correct Answer: 20 meters

Question: A train is travelling at a speed of 90 km/h. How much time will it take to cover a distance of 360 km?
Answer: undefined
Correct Answer: 4 hours

Question: What is meant by retardation?
Answer: undefined
Correct Answer: Negative Acceleration

Question: Explain how the area under a velocity-time graph is useful?
Answer: undefined
Correct Answer: It represents the displacement of the object.

Question: Give two examples of uniformly accelerated motion.
Answer: undefined
Correct Answer: Free fall, Motion of a car with constant acceleration.

Question: Derive the equation: v = u + at.
Answer: undefined
Correct Answer: Proof using definition of acceleration.

Question: What is the centripetal acceleration formula?
Answer: undefined
Correct Answer: a = v^2/r