Class Notes	
Class : IX	Topics: Sample QuestionWorksheet
Subject: Physics	Prepared by: ADP

1. A goalkeeper in a game of football pulls his hands backwards after holding the ball shot at the goal. This enables the goalkeeper to:
   (a) Exert large force on the ball
   (b) Increases the force exerted by the ball on hands
   (c) Increase the rate of change of momentum
   (d) Decrease the rate of change of momentum
2. Newton's third law of motion explains the two forces namely 'action' and 'reaction' coming into action when the two bodies are in contact with each other. These two forces:
   (a) Always act on the same body
   (b) Always act on the different bodies in opposite directions
   (c) Have same magnitude and direction
   (d) Acts on either body at normal to each other
3. When a balloon held between the hands is pressed, its shape changes. This happens because:
   (a) Balanced forces act on the balloon
   (b) Unbalanced forces act on the balloon
   (c) Frictional forces act on the balloon
   (d) Gravitational force acts on the balloon
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5. The acceleration of an object is inversely proportional to:
   (a) Force.
   (b) Momentum.
   (c) Mass.
   (d) Velocity.

6. Change in momentum when a car weighing 700kg changes its speed from 100m/s to 200 m/s is:
   (a) 14000 kg.m/s
   (b) 10500000 kg.m/s
   (c) 21000000 kg.m/s
   (d) 70000 kg.m/s

7. Momentum of a body of mass 0.5 kg moving with a speed of 10 m/s is
   (a) 2.5 kg.m/s
   (b) 5 kg.m/s
   (c) 0.5 kg.m/s
   (d) 50 kg.m/s

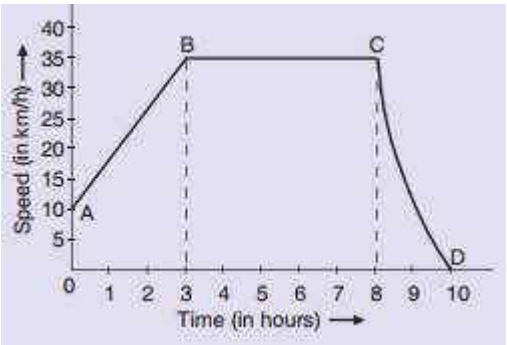
8. Which of the following options best explains the incident of the adjacent figure?

(a) Inertia
(b) Conservation of momentum
(c) Acceleration
(d) None of these

A gunman gets a jerk on firing a bullet.

9. The figure shown here is an example of:
(a) Inertia of rest
(b) Inertia of motion
(c) Inertia of direction
(d) Conservation of linear momentum

10. Which part of the graph shows zero acceleration?
(a) AB
(b) BC
(c) CD
(d) None of these



11. Assertion : Displacement of an object may be zero even if the distance covered by it is not zero.
Reason : Displacement is the shortest distance between the initial and final position.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both Assertion and Reason are false.

12. Assertion : Velocity versus time graph of a particle in uniform motion along a straight path is a line parallel to the time axis.
Reason : In uniform motion the velocity of a particle increases as the square of the time elapsed.
(a)Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both Assertion and Reason are false.

13. Assertion : the speedometer of a car measures the instantaneous speed of the car.
Reason : Average speed is equal to the total distance covered by an object divided by the total time taken.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both Assertion and Reason are false.

14. Assertion : If a particle is moving with constant velocity, then average velocity for any time interval is equal to instantaneous velocity.
Reason : If average velocity of a particle moving on a straight line is zero for a given time interval, then instantaneous velocity at some instant within this interval must be zero.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both Assertion and Reason are false.

Case Study: Sharman and Shikha went to Mathura through Yamuna express way. Sharman started a car and accelerated so highly that the car was running at 108 Km/h within 8 sec. Shikha kept a track on speedometer and stopped him from doing so and told him that over speeding on road would be a straight invitation to life staking situation. She also suggested him to fasten the seat belts properly, Though Sharman wanted an adventure of speeding but he was convinced by Shikha.

15. The measuring device used by Shikha is:
(a) Odometer
(b) Barometer
(c) Speedometer
(d) Thermometer

16. If Shikha calculated the acceleration of the car, what is the value of it?
(a) 2.75 m/s^2
(b) 3.25 m/s^2
(c) 3.75 m/s^2
(d) 4.25 m/s^2

17. Which formula was used by Shikha to calculate it?
(a) t – u/v
(b) u + v – t
(c) v/ut
(d) (v-u)/t

18. In case of accident, the seat belt will save life by:
(a) Exerting large force on the dash board
(b) Increasing the force exerted by the car
(c) Increasing the rate of change of momentum
(d) Decreasing the rate of change of momentum

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