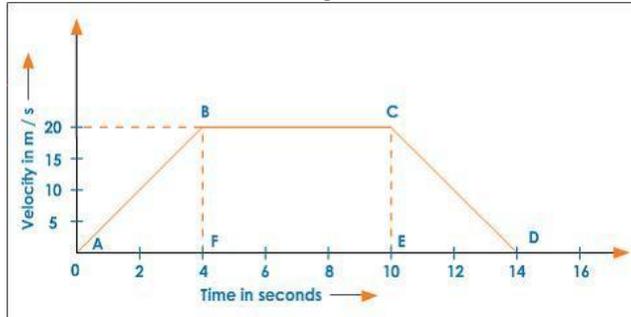


Class: 9
Subject: Physics
Topic: Force and laws motion
No. of Questions: 20

- Q1. What is the force and net Force?
- Q2. Difference between Balanced force and unbalanced force.
- Q3. What Is Inertia?
- Q4. When the brakes are applied to the bike the back sweater moves forward why?
- Q5. There are three solids made up of aluminum, steel and wood, of the same shape and same volume. Which of them would have highest inertia?
- Q6. Two balls of the same size but of different materials, rubber and iron are kept on the smooth floor of a moving train. The brakes are applied suddenly to stop the train. Will the balls start rolling? If so, in which direction? Will they move with the same speed? Give reasons for your answer
- Q7. Horse need continues force in order to move a cart with a constant speed. Why?
- Q8. Write a short note on third law of motion
- Q9. How a karate player can break a pile of tiles with a single blow of his hand?
- Q10. Define momentum?
- Q11. Explain why it is easier to stop a tennis ball than a cricket ball moving with the same speed?
- Q12. Why a goalkeeper in a game of football pulls his hands backwards after holding the ball shot at the goal.
- Q13. A passenger in a moving train tosses a coin which falls behind him. Why?
- Q14. State and explain the three laws of Newton?
- Q 15: A car of mass 200 kg moving at 36 km/h is brought to rest after it covered a distance of 10 m. Find the retarding force acting on the car.
- Q 16: What will be the change in acceleration of a sliding block, if its mass is doubled while a constant force is acting on it?

- Q 17: The figure below show a velocity time graph for a scooters having a total mass of 150 kg. From the graph calculate - a) The acceleration in first 4 seconds b) The distance covered in the first 4 seconds. c) The force acting in the first 4 seconds.



- Q 18: A certain force exerted for 1.2 seconds raises the speed of an object from 1.8 m/s to 4.2 m/s. Later the same force is applied for 2 seconds. How much does the velocity change in 2 seconds?
- Q19. Which of the following has more inertia: (a) a rubber ball and a stone of the same size? (b) a bicycle and a train? (c) a five-rupees coin and a one-rupee coin?
- Q20. In the following example, try to identify the number of times the velocity of the ball changes: "A football player kicks a football to another player of his team who kicks the football towards the goal. The goalkeeper of the opposite team collects the football and kicks it towards a player of his own team". Also identify the agent supplying the force in each case.