

- (a) 0.5 N (b) 50 N (c) 5 N (d) 0.05 N

7. The seat belts are provided in the cars so that if the car stops suddenly due to an emergency braking, the persons sitting on the front seats are not thrown forward violently and saved from getting injured. Can you guess the law due to which a person falls in forward direction on the sudden stopping of the car?

- (a) Newton's first law of motion (b) Newton's second law of motion
(c) Newton's third law of motion (d) Newton's law of gravitation

8. 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

9. Which of the following situations involves the Newton's second law of motion?

- (a) A force can stop a lighter vehicle as well as a heavier vehicle which are moving
(b) A force exerted by a lighter vehicle on collision with a heavier vehicle results in both the (vehicles coming to a standstill
(c) A force can accelerate a lighter vehicle more easily than a heavier vehicle which are moving
(d) A force exerted by the escaping air from a balloon in the downward direction makes the balloon to go upwards

10. The speed of a car weighing 1500 kg increases from 36 km/h to 72 km/h uniformly. What will be the change in momentum of the car?

- (a) 15000 kg km/h (b) 15000 kg m/s (c) 54000 kg m/s (d) 54000 g m/s

11. A passenger in a moving train tosses a coin which falls behind him. Observing this statement what can you say about the motion of the train?

- (a) Accelerated (b) Retarded (c) Along circular tracks (d) Uniform

12. Newton's first law of motion says that a moving body should continue to move forever, unless some external forces act on it. But a moving cycle comes to rest after some time if we stop pedaling it. Can you choose the correct reason for the stoppage of cycle?

- i. Air resistance ii. Gravitational pull of the earth
iii. Friction of the road iii. Heat of the environment

Choose the correct option:

- (a) (iii) and (iv) (b) (i) and (iii) (c) (i) and (ii) (d) (ii) and (iii)

13. A man wearing a bullet-proof vest stands on roller skates. The total mass is 80 kg. A bullet of mass 20 g is fired at 400 m/s. It is stopped by the vest and falls to the ground. What is then the velocity of the man?

- (a) 1 m/s (b) 0.1 m/s (c) 0.01 m/s (d) 0 m/s

14. The unit of measuring the momentum of a moving body is:

- (a) m/s
(b) kg.m/s
(c) kg.m/s²
(d) N m²/kg²

Answer:(b) kg.m/s

15. The inertia of a moving object depends on:

- i. Mass of the object
ii. Momentum of the object
iii. Speed of the object
iv. Shape of the object

Choose the correct option:

- (a) (i) and (ii)
(b) only (i)
(c) only (ii)
(d) (iii) and (iv)