



Class 11 Physics | Laws Of Motion

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A 4 kg body accelerates at 3 m/s^2 . Net force is:

- A. 7 N B. 12 N C. 1.33 N D. 24 N

2. A constant 5 N force acts for 4 s. Impulse is:

- A. 1.25 N s B. 10 N s C. 20 N s D. 9 N s

3. Action and reaction forces act on:

- A. Different bodies
B. Only interacting charged bodies
C. Only stationary bodies
D. The same body

4. A passenger falls forward when a bus stops suddenly due to:

- A. Loss of mass
B. Inertia of motion
C. An increased gravitational force
D. A forward force from the brakes

5. A 2 kg block on a smooth horizontal surface is pulled by 10 N. Acceleration is:

- A. 20 m/s^2 B. 5 m/s^2 C. 0.2 m/s^2 D. 8 m/s^2

6. A 5 kg mass hangs at rest from a light string. Tension ($g=10$) is:

- A. 50 N B. 100 N C. 5 N D. 0

7. A 60 kg person accelerates upward at 2 m/s^2 in a lift. Apparent weight ($g=10$) is:

- A. 600 N B. 720 N C. 120 N D. 480 N

8. A body in a freely falling lift has apparent weight:

- A. Zero B. $mg/2$ C. $2mg$ D. mg

9. A block has normal reaction 100 N and $\mu_s=0.4$. Maximum static friction is:

- A. 250 N B. 40 N C. 4 N D. 100 N

10. A 10 N horizontal pull fails to move a block whose limiting friction is 20 N. Actual friction is:

- A. 10 N B. 20 N C. 0 D. 30 N

11. Two 2 kg and 3 kg blocks move together on a smooth surface under 15 N. Acceleration is:

- A. 7.5 m/s^2 B. 3 m/s^2 C. 15 m/s^2 D. 5 m/s^2

12. A 2 kg body changes velocity from 3 to 7 m/s in the same direction. Momentum change is:

- A. 8 kg m/s B. 14 kg m/s
C. 4 kg m/s D. 20 kg m/s

13. A frictionless banked road of radius r and angle θ has safe speed:

- A. $\sqrt{rg \tan \theta}$ B. $rg \tan \theta$ C. $\sqrt{rg \cot \theta}$ D. $\sqrt{g/r}$

14. A body is held at rest on a smooth incline of angle θ by a force parallel to the plane. Normal reaction is:

- A. $mg \sin \theta$ B. $mg \tan \theta$ C. $mg/\cos \theta$ D. $mg \cos \theta$

15. A ball of mass 0.2 kg moves in a circle at 5 m/s with radius 0.5 m. Net radial force is:

- A. 10 N B. 5 N C. 2 N D. 20 N

ANSWER KEY — check after completing all 15 questions

1.B 2.C 3.A 4.B 5.B 6.A 7.B 8.A 9.B 10.A 11.B 12.A 13.A 14.D 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper