

CHAPTER-8 | Force and Laws of Motion

QUIZ
PART-01

1. Newton's first law is also called:

- A. Law of inertia
- B. Law of action and reaction
- C. Law of acceleration
- D. Law of gravity (A)

Explanation: Newton's first law is the law of inertia.

2. A body at rest stays at rest due to:

- A. Balanced force
- B. Unbalanced force
- C. Inertia
- D. Velocity (C)

Explanation: Inertia keeps an object at rest.

3. Inertia depends on:

- A. Mass
- B. Volume
- C. Shape
- D. Surface area (A)

Explanation: More mass means more inertia.

4. Newton's second law is:

- A. $F = ma$
- B. $F = mv$
- C. $F = m/g$
- D. $F = m^2$ (A)

Explanation: $F = ma$, force equals mass times acceleration.

5. SI unit of force is:

- A. Joule
- B. Newton
- C. Watt
- D. Kilogram (B)

Explanation: The unit of force is Newton (N).

6. Doubling mass doubles the required force for the same acceleration:

- A. True
- B. False
- C. Kilogram
- D. Newton (A)

Explanation: $F = ma$, so doubling mass doubles force.

7. If velocity is constant, net force is:

- A. Zero
- B. Maximum
- C. Equal to velocity
- D. Constant (A)

Explanation: Constant velocity means no net force.

8. For every action, there is an equal and opposite:

- A. Force
- B. Acceleration
- C. Reaction
- D. Momentum (C)

Explanation: Action and reaction forces are equal and opposite.

9. A person jumping from a boat moves backward because of:

- A. Inertia
- B. Action and reaction
- C. Friction
- D. Gravity (B)

Explanation: Jumping forward causes the boat to move backward.

10. The law of inertia was first described by:

- A. Newton
- B. Galileo
- C. Einstein
- D. Kepler (B)

Explanation: Galileo first described the law of inertia.