

Chapter - 5 | Exploring Forces

QUIZ-01

1. What is the SI unit of force?

- Kilogram
- Joule
- Newton
- Watt

(C)

Explanation: Force is measured in newton (N), which is the SI unit of force.

2. Which of the following is a non-contact force?

- Muscular force
- Friction
- Magnetic force
- Pushing a table

(C)

Explanation: Magnetic force acts without direct contact, hence it is a non-contact force.

3. What kind of force is applied when rubbing a balloon with wool?

- Muscular force
- Magnetic force
- Gravitational force
- Electrostatic force

(D)

Explanation: Rubbing creates static charge leading to electrostatic force.

4. Which force makes it difficult to slide an object on a rough surface?

- Muscular force
- Magnetic force
- Gravitational force
- Friction

(D)

Explanation: Friction opposes motion, and it increases on rough surfaces.

5. What happens to an object when the forces acting on it are balanced?

- It accelerates
- It deforms
- It remains at rest or moves with constant speed
- It explodes

(C)

Explanation: Balanced forces do not change the state of motion of an object.

6. Which of the following is always an attractive force?

- Friction
- Magnetic force
- Electrostatic force
- Gravitational force

(D)

Explanation: Gravitational force always pulls objects toward Earth.

7. What does a spring balance measure?

- Mass only
- Speed of object
- Temperature
- Weight

(D)

Explanation: Spring balance measures the force with which Earth pulls an object—its weight.

8. Which factor does buoyant force depend upon?

- Shape of object
- Density of liquid
- Colour of object
- Volume of air

(B)

Explanation: Buoyant force depends on the density of the liquid in which the object is placed.

9. What happens when two like charges come close to each other?

- They attract
- They repel
- They disappear
- No effect

(B)

Explanation: Like charges repel each other.

10. Which object would sink in water?

- One with more buoyant force than gravity
- One with equal buoyant and gravitational force
- One with less buoyant force than gravity
- One made of wool

(C)

Explanation: An object sinks if the gravitational force on it is greater than the buoyant force.