

## Chapter - 5 | Exploring Forces

## QUIZ-01

1. What is the SI unit of force?

- A. Kilogram
- B. Joule
- C. Newton
- D. 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?

- A. Muscular force
- B. Friction
- C. Magnetic force
- D. 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?

- A. Muscular force
- B. Magnetic force
- C. Gravitational force
- D. 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?

- A. Muscular force
- B. Magnetic force
- C. Gravitational force
- D. 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?

- A. It accelerates
- B. It deforms
- C. It remains at rest or moves with constant speed
- D. 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?

- A. Friction
- B. Magnetic force
- C. Electrostatic force
- D. Gravitational force (D)

**Explanation:** Gravitational force always pulls objects toward Earth.

7. What does a spring balance measure?

- A. Mass only
- B. Speed of object
- C. Temperature
- D. Weight (D)

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

8. Which factor does buoyant force depend upon?

- A. Shape of object
- B. Density of liquid
- C. Colour of object
- D. 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?

- A. They attract
- B. They repel
- C. They disappear
- D. No effect (B)

**Explanation:** Like charges repel each other.

10. Which object would sink in water?

- A. One with more buoyant force than gravity
- B. One with equal buoyant and gravitational force
- C. One with less buoyant force than gravity
- D. One made of wool (C)

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