

CLASS 8

SCIENCE

EXTRA QUESTIONS

Extra Questions: Class 8 Science Chapter 5 Exploring Forces

Practice questions beyond the textbook exercise, testing deeper understanding of force, weight, and buoyancy for Class 8 Science Chapter 5: Exploring Forces. These Class 8 Science Chapter 5 important questions are handy for last-minute exam practice.

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Extra Questions: Class 8 Science Chapter 5 Exploring Forces

1 (Assertion-Reason). Assertion: Mass and weight are the same thing. Reason: Both are measured using a spring balance.

Solution: The assertion is **false** — mass and weight are different physical quantities (mass is fixed, weight varies with gravity); the reason is also misleading since a beam balance measures mass while a spring balance measures weight.

2 (Short Answer). Name the two types of contact forces mentioned in this chapter.

Solution: Muscular force and frictional force.

3 (Applied). Two identical bar magnets are brought close with opposite poles facing each other. What happens, and is contact needed?

Solution: They **attract** each other; no contact is needed, since magnetic force is a non-contact force.

4 (Assertion-Reason). Assertion: A ship made of iron floats on water. Reason: The ship's shape displaces enough water so the buoyant force equals its weight.

Solution: Both true, and the reason correctly explains the assertion — despite iron being denser than water, the ship's hollow shape increases the volume of water displaced.

5 (Short Answer). What SI unit is weight measured in?

Solution: Newton (N).

6 (Applied). A person weighs 600 N on Earth. Estimate their approximate weight on the Moon.

Solution: Moon's gravity is about one-sixth of Earth's, so weight $\approx 600 \div 6 = \mathbf{100\ N}$.

7 (Synthesis). Why does rubbing a balloon on hair make the hair stand up, but this doesn't happen without rubbing?

Solution: Rubbing transfers electric charge to the balloon, giving it an electrostatic (non-contact) force that attracts the oppositely/uncharged hair strands; without rubbing, neither object is charged, so no such force exists.

8 (Assertion-Reason). Assertion: A block of wood and a block of iron of the same size, placed in water, experience the same buoyant force. Reason: Buoyant force depends only on the volume of liquid displaced, not on the material's weight.

Solution: Both true, and the reason correctly explains the assertion — same size means same volume displaced (if both are fully submerged), giving equal buoyant force, even though only the wood may float.

9 (Short Answer). Give one example of a force that can act without any contact.

Solution: Gravitational force (or magnetic force, or electrostatic force).

10 (Applied). A block resting on a rough table needs 20 N to start moving, but only 12 N to keep it moving at constant speed. What does this suggest about friction?

Solution: It suggests friction is greater just before motion starts (static friction, resisting the initial push) than while the object is already sliding (kinetic/sliding friction, which is generally smaller).

Class 8 Science Chapter 5 – Solutions and Notes

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