

**CBSE Class–VIII Science**  
**NCERT SOLUTION**  
**Chapter-11**  
**Force and Pressure**

---

**1. Give two examples each of situations in which you push or pull to change the state of motion of objects.**

**Ans.** Two examples of push force are as follows:

- A heavy box at rest is pushed to move it from one room to another. This changes the state of motion of the box.
- A player pushes a football using his foot. This changes the state of motion of the ball.

Two examples of pull force are as follows:

- Rope is pulled to draw water from a well. This changes the state of motion of the water bucket.
  - A drawer is pulled to open it. This changes the state of motion of the drawer
- 

**2. Give two examples of situations in which applied force causes a change in the shape of an object.**

**Ans. (i)** Making a chapati from a ball of dough.

**(ii)** Stretching of rubber band.

---

**3. Fill in the blanks in the following statements.**

**(a)** To draw water from a well, we have to \_\_\_\_\_ at the rope.

**(b)** A charged body \_\_\_\_\_ an uncharged body towards it.

**(c)** To move a loaded trolley, we have to \_\_\_\_\_ it.

**(d)** The north pole of a magnet \_\_\_\_\_ the north pole of another magnet.

**Ans.** Fill in the blanks

- (a) To draw water from a well, we have to pull at the rope.
  - (b) A charged body attracts an uncharged body towards it.
  - (c) To move a loaded trolley, we have to pull it.
  - (d) The north pole of a magnet repels the north pole of another magnet.
- 

**4. An archer stretches her bow while taking aim at the target. She then releases the arrow, which begins to move towards the target. Based on this information fill up the gaps in the following statements using the following terms:**

**Muscular, contact, non-contact, gravity, friction, shape, attraction**

- (a) To stretch the bow, the archer applies a force that causes a change in its \_\_\_\_.
- (b) The force applied by the archer to stretch the bow is an example of \_\_\_\_\_ force.
- (c) The type of force responsible for a change in the state of motion of the arrow is an example of a \_\_\_\_\_ force.
- (d) While the arrow moves towards its target, the forces acting on it are due to \_\_\_\_ and that due to \_\_\_\_\_ of air.

**Ans. (a)** shape

**(b)** muscular

**(c)** contact

**(d)** gravity, friction.

---

**5. In the following situations identify the agent exerting the force and the object on which it acts. State the effect of the force in each case.**

- (a)** Squeezing a piece of lemon between the fingers to extract its juice.

**(b) Taking out paste from a toothpaste tube.**

**(c) A load suspended from a spring while its other end is on a hook fixed to a wall.**

**(d) An athlete making a high jump to clear the bar at a certain height.**

**Ans.**

S.No	Agent exerting the force	Object on which it acts	Form of effect
(a)	Fingers	Lemon	Change in shape of lemon
(b)	Fingers	Toothpaste tube	Change in shape of tube
(c)	Load	Spring	Change in shape of Spring
(d)	Muscles of Athlete	Athlete	Change of state of motion of Athlete/ High jump

**6. A blacksmith hammers a hot piece of iron while making a tool. How does the force due to hammering affect the piece of iron?**

**Ans.** The force of hammering changes the shape of iron in the form of desired tool.

**7. An inflated balloon was pressed against a wall after it has been rubbed with a piece of synthetic cloth. It was found that the balloon sticks to the wall. What force might be responsible for the attraction between the balloon and the wall?**

**Ans.** Electrostatic force.

**8. Name the forces acting on a plastic bucket containing water held above ground level in your hand. Discuss why the forces acting on the bucket do not bring a change in its state of motion.**

**Ans.** The forces that act on the bucket are as follows:-

**(i)** The pressure of water contained in it.

**(ii)** Force of gravity due to Earth's gravitation.

Pressure of water can not change the state of motion because it is inside the bucket and force of gravity is compensated by force applied vertically upward using rope.

**9. A rocket has been fired upwards to launch a satellite in its orbits. Name the two forces acting on the rocket immediately after leaving the launching pad.**

**Ans.** The two forces acting on rocket are:

- Force due to gravity acts vertically downward.
  - Frictional force of atmosphere.
- 

**10. When we press the bulb of a dropper with its nozzle kept in water, air in the dropper is seen to escape in the form of bubbles. Once we release the pressure on the bulb, water gets filled in the dropper. The rise of water in the dropper is due to**

- (a) Pressure of water.
- (b) Gravity of the earth.
- (c) Shape of rubber bulb.
- (d) Atmospheric pressure.

**Ans. (d)** Atmospheric pressure.

---