



## FORCE AND PRESSURE

1. Give two examples each of situations in which you push or pull to change the state of motion of objects.
2. Give two examples of situations in which applied force causes a change in the shape of an object.
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.

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 .....
- (d) While the arrow moves towards its target, the forces acting on it are due to.....and that due to .....\_of air.

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

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?

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?

**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.**

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

**10. When we press the bulb of a dropper with its nozzle kept in water, the 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) the pressure of water.
- (b) gravity of the earth.
- (c) The shape of a rubber bulb.
- (d) atmospheric pressure