

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Force and Pressure

- Q1. Name the type of forces involved in the following:
- a. A horse pulling a cart. \_\_\_\_\_
  - b. Moving a loaded cart. \_\_\_\_\_
  - c. A sticker attached to steel almirah without glue. \_\_\_\_\_
  - d. A coin falling to the ground on slipping from hand. \_\_\_\_\_
  - e. A plastic comb rubbed in dry hair picking up tiny pieces of paper.  
\_\_\_\_\_
  - f. A moving boat coming to rest when rowing is stopped. \_\_\_\_\_

Q2. 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. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q3. Explain why, when a person stands on a cushion, the depression is much more than when he lies down on it.

Ans. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Force and Pressure

Q1. Name the type of forces involved in the following:

- a. A horse pulling a cart. Muscular force
- b. Moving a loaded cart. Muscular force
- c. A sticker attached to steel almira without glue. Magnetic force
- d. A coin falling to the ground on slipping from hand. Gravitational force
- e. A plastic comb rubbed in dry hair picking up tiny pieces of paper. Electrostatic force
- f. A moving boat coming to rest when rowing is stopped. Frictional force

Q2. 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. When inflated balloon is rubbed with a piece of synthetic cloth, it gets electrically charged. A charged body exerts an electrostatic force on uncharged body. Thus, when the charged balloon is pressed against a wall, it sticks to the wall because of the electrostatic force acting between the charged balloon and the wall.

Q3. Explain why, when a person stands on a cushion, the depression is much more than when he lies down on it.

Ans. When a man stands on a cushion then only his two feet are in contact with the cushion. Due to this, the weight of man falls on a small area of cushion producing a large pressure. This large pressure causes a big depression in the cushion. On the other hand, when the same man is lying on the cushion, then his whole body is in contact with the cushion. In this case, the weight of man falls on a much larger area of the cushion producing much smaller pressure. And this smaller pressure produces a very little depression in the cushion.