

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

Force and Pressure

Q1. Why nose bleeding occurs at high altitudes?

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

Q2. Does application of a force would always result in a change in the state of motion of the object?

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

Q3. 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. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Q4. Why atmospheric pressure decreases as we go higher up above the earth's surface?

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

## Force and Pressure

Q1. Why nose bleeding occurs at high altitudes?

Ans. At high altitudes, the atmospheric pressure becomes much less than our blood pressure. Since, our blood is at higher pressure than outside pressure, therefore, some of the blood vessels in our body burst and nose bleeding takes place at high altitudes.

Q2. Does application of a force would always result in a change in the state of motion of the object?

Ans. No. Many a time application of force does not result in a change in the state of motion. For example, a heavy box may not move at all even if you apply the maximum force that you can exert. Again, no effect of force is observed when you try to push a wall.

Q3. 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. In this case, muscular force is acting in upward direction and the force of gravity is acting in downward direction. The two forces are equal in magnitude but opposite in direction. Therefore, the net force on the bucket is zero. Hence, there is no change in its state of motion.

Q4. Why atmospheric pressure decreases as we go higher up above the earth's surface?

Ans. The pressure at any level in the atmosphere may be interpreted as the total weight of the air above a unit area at any elevation. Since most of the atmosphere's molecules are held close to the earth's surface by the force of gravity, air pressure decreases as we go higher up above the earth's surface.