

St. Andrews Scots Sr. Sec. School

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Session: 2025-2026 – Answer Key

Class: VIII

Subject: Science

Chapter: Force and Pressure

CHECK POINT 1

1. force 2. stop 3. increases 4. interaction

CHECK POINT 2

1. (T) 2. (F) 3. (T) 4. (F) 5. (F)

CHECK POINT 3

1. Pressure 2. depth 3. Pressure increases 4. Pressure gauge 5. newton per square metre

PRACTICE TIME

A. Tick (✓) the correct answer:

1. (b) 2. (c) 3. (b) 4. (a) 5. (c)

B. Assertion-Reason Type Questions:

1. (b) 2. (a) 3. (c) 4. (b)

C. Match the Columns:

1. (c) 2. (d) 3. (a) 4. (b)

D. Very Short Answer Type Questions:

1. Force
2. When two equal forces act in opposite direction, the object will move in the direction of bigger force.
3. Contact force.
4. Gravitational force.
5. Atmospheric pressure.

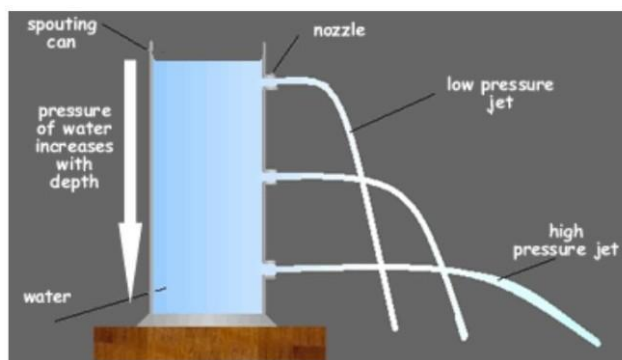
E. Short Answer Type Questions:

1. A force can pull or push the thing on which it is applied. It can change the shape of the object, increase or decrease speed of a moving object or stop a moving object.
2. When the object is in direct or indirect contact with the source of the force, the force applied on the object is called contact force. Muscular force, mechanical force and friction

are examples of contact force. The force acting on an object without touching it is known as noncontact force. Magnetic force, gravitational force and electrostatic force are examples of noncontact force.

3. When the area of contact increases, the pressure is decreased. Hence, the bases of the pillars of flyovers and bridges are made broad to make the pressure bearable to the ground.

4. The pressure exerted by the liquid increases with increase in the depth of the liquid and decreases with decrease in the depth of the liquid.



5. People having high blood pressure feel uncomfortable because of an imbalance between the pressure of body fluids and the atmospheric pressure at higher altitudes.

F. Long Answer Type Questions:

1. Force is caused by the interaction of two objects. For example, a man pulling a hand cart, a man pushing a cart and a football player kicking a football.

2. We use the muscular force of animals in many ways as follows:

(a) Elephants are made to drag heavy loads tied to them through strings or chains.

(b) Horse, camel and bullocks are used to pull carts.

(c) Mules and donkeys are made to carry loads and people from one place to another in hilly areas.

3. 'Liquids exert pressure on the wall of a container' can be shown by the following experiment:

Procedure: Take a plastic bottle and fix a glass tube near the bottom of it by heating the tube and quickly inserting it into the bottle. Seal the joint with molten wax. Cover the mouth of the glass tube with a balloon. Fill the bottle up to half with water. Observe the volume of the balloon. Pour some more water into the bottle and again observe the volume of the balloon.

Observation: The volume of the balloon increases on pouring more water into the bottle

Conclusion: Water (liquid) exerts pressure on the balloon and makes it grow in size.



Liquid exert pressure on the wall of the container

4. Some applications of atmospheric pressure are:

- (a) It helps us suck liquids through a straw.
- (b) It helps a person in parachuting or using a parachute while falling down from an aircraft against the gravitational force.
- (c) The changes in the atmospheric pressure on the surface of the earth help in weather prediction.

G. HOTS Questions:

1. At the given stage, both the teams are applying equal force in opposite direction.
2. Tyres of heavy trucks are made broader because this increases the area of contact and the force due to heavy weight of the truck is distributed over a wide range of area and hence the pressure on the road is reduced.
3. A parachute helps a person land safely because it blocks the air acting in upward direction and slows the rate of falling of the person while landing.

Passage/Case-based Questions:

1. The man lying on a bed of nails was not hurt because the pressure exerted due to his weight got distributed over all the nails equally.
2. Iron nails have pointed ends to increase pressure on the surface and pierce it easily.