

# Force and Pressure

## ORAL QUESTIONS

### A. Answer these questions orally.

1. What is the pressure caused due to atmosphere called?
2. What is the natural force which opposes motion?
3. Can force stop a moving object?
4. What is a push or a pull applied on an object known as?
5. Does the pressure in liquids increase or decrease with the depth of the liquid?

### B. Rewrite the following statement.

1. If for a given force, area is reduced, the pressure also decreases.
2. Neutrons are positively charged particles.
3. A push or a pull applied on an object is known as a pressure.
4. Gravitational force is due to attraction or repulsion between two charged bodies.
5. Contact force is a force which acts on a body from a distance, without touching it.

## PUZZLES/QUIZ

### C. Find atleast eight terms that are related to Force and Pressure.

A	G	R	A	V	I	T	A	T	I	O	N
E	R	N	L	L	L	A	E	L	U	W	R
P	E	F	O	R	C	E	O	M	R	A	E
R	M	A	G	N	E	T	I	C	E	B	T
E	U	Y	R	E	C	Y	R	C	O	N	N
S	S	R	X	Q	E	O	E	O	P	M	Y
S	C	B	N	W	Y	R	N	N	Q	E	M
U	U	Q	M	F	R	I	C	T	I	O	N
R	L	E	W	X	Q	B	Y	A	A	R	Q
E	A	W	Q	Y	W	D	B	C	W	C	E
Q	R	J	Y	B	Z	I	Q	T	Z	O	T

## CLASS TEST

### D. MCQ– Tick (✓) the correct option.

1. Which of the following statements are incorrect?
  - (a) Friction always acts opposite to the direction of motion.
  - (b) Pressure in liquids decreases with the depth of the liquid.
  - (c) Friction is an example of a non-contact force.
  - (d) Gases exert pressure in all directions

(i) a and b (ii) b and c (iii) c and d (iv) only a
2. When two equal forces act on a body simultaneously opposite to each other.
  - (a) The object moves in the right direction
  - (b) The object moves in the left direction
  - (c) They cancel each other and no effect of force is caused
  - (d) None of these
3. The tyres of a truck and other heavy vehicles are made

(a) Broad and thin	<input type="checkbox"/>	(b) Broad and thick	<input type="checkbox"/>
(c) Narrow and thin	<input type="checkbox"/>	(d) Narrow and thick	<input type="checkbox"/>
4. A force can.

(a) Move an object lying at rest	<input type="checkbox"/>	(b) Change the shape of an object	<input type="checkbox"/>
(c) Stop a moving object	<input type="checkbox"/>	(d) All of these	<input type="checkbox"/>

### E. Very short answer questions.

1. What is force?

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2. What is pressure?

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3. What is muscular force?

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4. What is gravitational force?

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5. What is atmospheric pressure?

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6. What is friction?

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7. What is electrostatic force?

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8. What do you understand by gravitation?

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9. What is magnetic force?

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**F. Short answers questions.**

1. Differentiate between Contact forces and Noncontact forces

CONTACT FORCES	NONCONTACT FORCES

2. What are the effects produced by force?

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3. Two objects mutually interact and thereby apply force on each other—justify this statement with an example.

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4. How is the resultant force calculated when more than one force are applied in the same direction simultaneously on an object.

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5. What would happen if the two opposite forces acting simultaneously on a body are not equal?

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6. Give one example where the following forces are used to perform the actions:

(a) Muscular force

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(b) Gravitational force

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(c) Magnetic force

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7. Is there a gravitational force of attraction between two books lying on the table? If yes why do we not see the books moving towards each other?

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**G. Long answer questions.**

1. Where in your daily life do you experience the presence of electrostatic force?

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2. State any two applications of atmospheric pressure.

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3. 'To apply a force, a minimum of two bodies must interact with each other.' Justify this statement.

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### HOME ASSIGNMENT

#### H. Think and answer.

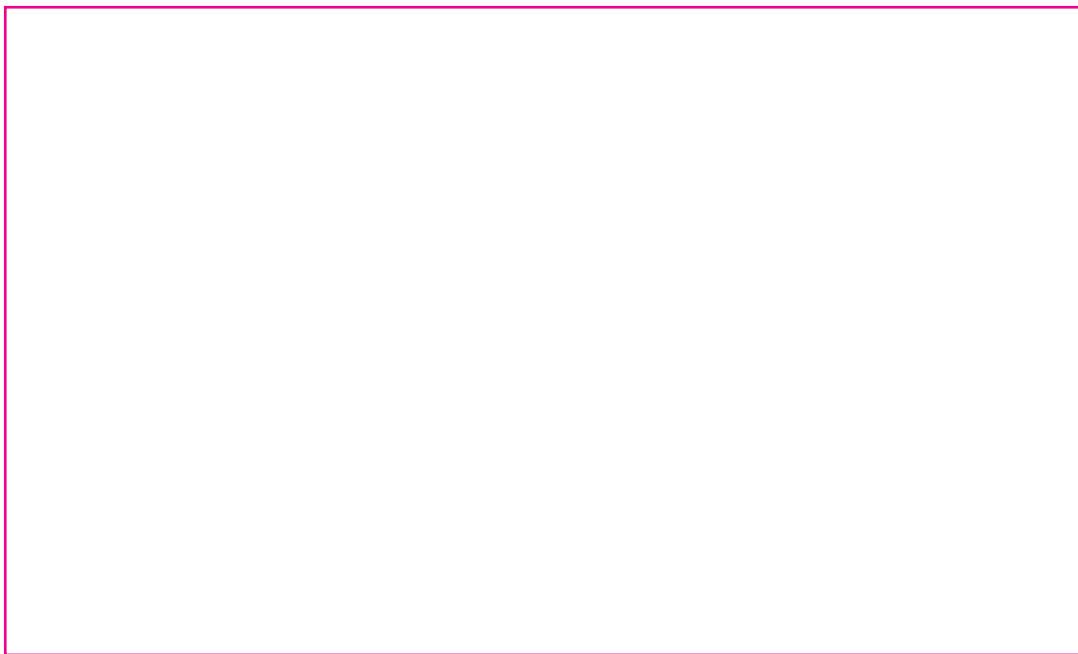
1. Teena wanted to chop onions into fine thin slices to cook food. The knife she used for chopping onions was blunt. She found it uneasy to chop onions and she did not even get fine result. What could be the reason. Home assignment?

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2. Vandana took a glass made of plastic and made three small holes on the sides of the glass at the same height from the base of the glass. She then filled the glass with water.

(a) Draw the streams of water as will be observed coming out from the holes.



(b) Do the three streams of water fall at equal distances from the base of the glass?

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(c) What does this activity imply?

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(d) What would have happened had there been no pressure due to the water in the glass?

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3. (a) Shikha took a straw and sucked in water to pull the straw from a bottle of water. She immediately closed the upper end of the straw with her thumb. She observed that the water does not fall out of the straw. Why?

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(b) When she removed the thumb, she observed that the water falls out of the straw. Why?

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## WORKSHEET

### **I. Give reasons for the following.**

1. The tyres of truck and other heavy vehicles are made broad and thick.

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2. The pillars of the bridges and flyovers have a broad base.

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3. You pedal a cycle to make it move, but when you stop pedalling, the cycle stops after moving a distance.

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4. A paper clutcher keeps the paper fixed in its position.

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