



**Octahedral classes, kharadi**  
**2nd floor, yashwant plaza, near bank of India,**

**Class 08 - Science**

**Force & pressure**

**Maximum Marks: 75**

**Time Allowed: 1 hour and 30 minutes**

**Section A**

1. Give two examples each of situations in which you push or pull to change the state of motion of objects. 2
2. What do you know by the state of motion? 2
3. Have you ever seen a game of tug-of-war? In this game two teams pull at a rope in opposite direction. All members of either team try to pull the rope in their direction. Sometimes the rope simply does not move. Explain why? 2
4. What is a force? Explain with the help of some examples. 2
5. A rocket has been fired upwards to launch a satellite in its orbit. Name two forces acting on the rocket immediately after leaving the launching pad. 2
6. Why is force of friction called contact force? 2
7. Explain that liquids exert equal pressure at the same depth. 2
8. On what factors does the effect of forces depends? 2
9. Explain that forces are due to an interaction between objects. 2
10. We know that there is a huge amount of atmospheric pressure on us. But we do not experience its effects why? 2
11. What happens when 2
  - i. Two forces are exerted in same direction?
  - ii. Two forces are exerted in opposite directions?
12. 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. 2
13. Give two examples of situations in which applied force cause a change in the shape of an object. 2
14. How does an applied force changes the speed of an object? 2
15. What may be the consequences when a force is applied on an object? 2
16. a. How does the pressure of a liquid depend on its depth? 3

- b. Explain why, the walls of a dam are thicker near the bottom than at the top? 3
17. Define pressure. Write its mathematical expression and SI unit. 3
18. Explain why, atmospheric pressure decreases as we go higher up above the earth's surface? 3
19. a. What is meant by atmospheric pressure? What is the cause of atmospheric pressure? 3
- b. Why are our bodies not crushed by the large pressure exerted by the atmosphere?
20. It is easier to walk on soft sand if we have flat shoes rather than the shoes with small heels. Give reason. 3
21. a. What is meant by contact force? Explain with the help of an example. 3
- b. What is meant by non contact force? Explain with the help of an example.
22. Define electrostatic force. Why it is called a non contact force? Explain by giving examples. 3
23. Name the forces actin on a plastic bucket containing water held above the ground level in your hand. Explain why the forces acting on the bucket do not bring a change in the state of motion. 3
24. Explain the working of a dropper and its principle. 3
25. Give reasons: 3
- a. School bags should have wider straps.
- b. A sharp knife cuts better than a blunt knife.

26. **Match the following:** 2

Column A	Column B
a. Layer of air	p. in all directions
b. Atmospheric pressure	q. charged particles
c. Liquids exert pressure	r. atmosphere
d. Electrostatic force	s. maximum at sea level

27. **Match the following:** 2

Column A	Column B
a. Isaac Newton	p. pascal
b. Charged comb	q. gravitational force

c. SI unit of pressure	r. large pressure
d. Small area	s. attracts pieces of paper

28. Match the following:

2

Column A	Column B
a. Atmospheric pressure decreases	p. atmospheric pressure
b. Syringe	q. net force is zero
c. SI unit of force	r. as we go up
d. Tug of war	s. Newton

29. Match the following:

2

Column A	Column B
a. Muscular force	p. force per unit area
b. Pressure	q. magnitude as well as direction
c. Pressure in liquids	r. contact force
d. Force	s. increases with depth

30. Match the items given in Column A with those in Column B suitably:

2

Column A	Column B
(i) Force	(a) Non-contact force
(ii) Contact force	(b) Force on a unit area
(iii) Magnitude	(c) Push or pull
(iv) Force of gravity	(d) Muscular force
(v) Pressure	(e) Strength of force

31. Fill in the blanks:

1

- (1) Force acting due to action of muscles is called \_\_\_\_\_.
- (2) The force exerted per unit area is called \_\_\_\_\_.
- (3) A force applied on an object may change its \_\_\_\_\_.

32. 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 gaps in the following statements using the following terms: muscular, contact, non-contact, gravity, friction, shape, attraction.

1

- (a) To stretch the bow, the archer applies a force that cause 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 \_\_\_\_\_ force.

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

33. Fill in the blanks: 1

(1) The pull or push is called \_\_\_\_\_.

(2) Force of friction is an example of \_\_\_\_\_ force.

(3) The wear and tear in the machine parts is due to \_\_\_\_\_.

34. Fill in the blanks: 1

(i) Force acting on per unit area is called \_\_\_\_\_.

(ii) The north pole of a magnet \_\_\_\_\_ the north pole of another magnet.

(iii) A \_\_\_\_\_ or a \_\_\_\_\_ on an object is called force.

35. Fill in the blanks: 1

(i) To draw water from a well, we have to \_\_\_\_\_ at the rope.

(ii) A charged body \_\_\_\_\_ an uncharged body towards it.

(iii) To move a loaded trolley, we have to \_\_\_\_\_ it.