

Dr. M.K.K. ARYA MODEL SCHOOL, MODEL TOWN, PANIPAT
CLASS VIII (2018-19)
ASSIGNMENT
FORCE AND PRESSURE

1. Give two examples of muscular force.

Ans (i) Pulling of cart by the horse.

(ii) Lifting of the heavy logs of wood by the elephants.

2. How is the strength of force measured?

Ans By the magnitude of force.

3. What happens when the direction of force on a moving object is in the direction of a motion or in the opposite direction of its motion?

Ans when direction of force on a moving object is in the direction, the speed of the object increases.

When direction of force on a moving object is in the opposite direction, the speed of the object decreases.

4. What is change in the shape of the toothpaste tube on exerting the force?

Ans On exerting the force of toothpaste tube changes. Force changes the size and shape of the object.

5. What are contact forces? Give two examples.

Ans The forces which work in the contact of the object are known as contact forces.

examples: stopping a moving ball by using your palm, holding a pen in hand.

6. Which force does work during eating the food?

Ans During eating the food we use muscular force.

7. What are non contact force? Give examples of it.

Ans The forces which work without contact with the object, are known as non- contact forces.

examples: attraction of iron articles by magnetic force of magnets, attraction of objects

8. Why sharp knife is used to cut the fruits?

Ans A sharp knife is used to cut the fruits because the area of sharp knife reduces so the effect of smaller force increases the pressure and the fruit is cut easily.

9. What is atmosphere?

Ans The envelop of air all around the earth is known as atmosphere.

10. What is atmospheric pressure?

Ans The pressure of air is known as atmospheric pressure.

11. Clarify that why does the speed of tyre increases on pushing?

Ans The force exerted on tyre is in the direction of its motion and the force is in the direction of its motion then the speed of the object increases. Therefore, the speed of the tyre increases whenever it is pushed.

12. Give such an example in which speed and direction of a moving object change.

Ans. In cricket, a batsman plays his or her shot by applying a force on the ball with the bat. Due to this the speed and the direction of the moving ball change.

13. Why is nail made pointed?

Ans By making the nail pointed, its head's area reduces, due to this the exerted force produces more pressure. Therefore, it can be pushed easily into the wood.

14. What is pressure? Give its unit.

Ans The force acting on a unit area is known as pressure.

$$\text{Pressure} = \frac{\text{Force}}{\text{Area}}$$

15. What is meant by atmospheric pressure? What is the value of atmospheric pressure?

Ans There is filled air in our surroundings in space. Air presses all the objects. This pressure of air is known as atmospheric pressure. Pressure equal to the 76 mm of mercury column is considered as one atmospheric pressure.

16. What are the types of forces?

Ans. Forces are mainly of two types:

- (i) **CONTACT FORCE:** The force which comes into play by the contact between the two bodies are known as contact forces. Contact forces are of two types :
 - (a) Muscular force: the forces resulting due to the action of muscles is known as a muscular force. E.g. pulling of cart by bullocks, the riding by the horse.

(b) Frictional force: It is an opposing force that acts between surfaces in contact moving with respect to each other.

(ii) NON-CONTACT FORCE: the forces which come into play even when the bodies are not in contact.

These are of three types:

(a) Magnetic force: The force which is responsible for attraction and repulsion between the poles of magnet is known as magnetic force.

(b) Electrostatic force: The main reason of this force is electric charge. A charged body is attracted by the other charged body or uncharged body without any direct contact. This force is known as electrostatic force.

(c) Gravitational force:- in this universe every objects attracts other object with a force, this force is known as gravitational force.

Q17. How pressure is exerted by liquids and gases?

Ans. Liquid and gases exert pressure as follows:-

- Pressure on the bottom of container depends on the height of column of gas or liquid. Due to this divers have to withstand a large pressure at the bottom of the sea.
- A fluid exerts pressure on the walls of containers for gases and liquids are usually cylindrical in shape to equally distribute the pressure on all portions of the wall.