



KALPAVRUKSHA MODEL SCHOOL

Answers of Assignments-2

Class: VIII

Sub: Physics

Date: 30.07.2021

Topic: FORCE AND FRICTION

I. Answers:

1. Write down any two effects of force.

ANS: The two effects of force are:

- i. Force can change the shape and size of an object.
- ii. Force can change the direction of a moving object.

2. Name any two non-contact forces.

ANS: Gravitational force and Magnetic force are two non-contact forces.

3. Why do tiny bits of paper get attracted when brought close to plastic pen or comb, which have recently been rubbed?

ANS: Because of Electrostatic force, when the plastic pen is rubbed in dry hair, it attracts tiny pieces of paper. Comb/plastic pen is charged after rubbing.

4. What is SI unit of Force?

ANS: The SI unit of force is Newton. (N)

5. Which force acts from a distance and pulls iron objects?

ANS: Magnetic force acts from a distance and pulls iron objects.

6. Can balance force bring about any change in the state of motion?

ANS: NO, balance force cannot bring any change in the state of motion.

7. What happens to the speed of moving object when it is pushed in the direction of motion?

ANS: Suppose we are moving on a bicycle at a certain speed. Now, if some one pushes the moving bicycle from behind, then the speed of bicycle increases and it will move faster in the direction of motion.

8. Two forces 200N and 300N acting on a body in same direction. What is resultant force?

ANS: Two forces 200N and 300N acting on a body in same direction. The resultant force is $200\text{N} + 300\text{N} = 500\text{N}$. If the two forces applied to an object act in the same direction, then the resultant force acting on the object is equal to the sum of the two forces.

9. **Write a note on the types of contact and non-contact forces.**

ANS: Types of non-contact forces:

Magnetic Force: Force exerted by a magnet on another magnet or on magnetic substances is called magnetic force. A magnet can exert force even without coming in contact, thus it is a non-contact force.

Example – A magnet attracts the opposite pole of another magnet and repels the similar pole of another magnet.

Electrostatic Force: Force exerted by a charged body is called electrostatic force. A charged body attracts an uncharged body. A positively charged body attracts a negatively charged body and repels a positively charged body without coming in contact, thus it is a non-contact force.

Example –Electrostatic force is responsible for raising our body hair when we try to take off a Terylene or polyester shirt in the dry weather.

Gravitational Force: Force exerted by earth, moon, sun and other planets is called gravitational force. Earth attracts all objects towards it. Similarly, all other planets along with moon attract all objects towards them. Since, earth attracts all objects even without coming in contact, thus gravitational force is a non-contact force.

Example – When anything is released from a height, it falls over the ground because of gravitational pull of earth.

Types of contact forces:

Muscular Force: -Force caused by the action of muscles is called muscular force. In other words, force resulting because of action of muscle is called muscular force. Muscular force is applied only after interaction with the object. Hence it is a type of contact force.

Example: – While kicking a ball, the player applies force over the ball using his leg muscles.

Friction: Force acting between the surfaces of two objects is called the force of friction. Force of friction always acts in the opposite direction of the movement of object. Force of friction is acting over all the moving objects.

Example – A moving football stops after going to a certain distance. This happens because of force of friction between the surface of ground and the surface of football.

10. **What is the direction of force of friction acting on a moving object?**

ANS: the direction of force of friction acting on a moving object is opposite to the direction of motion of object.