8TH FORCE AND PRESSURE

(Q.) 1. What is a force?(1 Mark)

(Ans) A push or a pull activity on an object, which can change the shape, size, speed and direction of motion of the object is called force.

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Q.) 3 What is a spring force?(1 Mark)

(Ans) The spring force is the force exerted by a compressed or stretched spring upon any object which is attached to it.

(Q.) 4 Define the push force with its effect.(1 Mark)

(Ans) Push is the press on the object that can change the shape and motion of the object.

(Q.) Define pull force and write its effects.(1 Mark)

(Ans) Dragging on the object is called pull force. It can change the shape and direction of motion of the object.

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Q.) Define Muscular Force?(1 Mark)

(Ans) The force resulting due to the action of muscles is known as the muscular force. This force is caused by the action of muscles in our body.

(Q.) What is the Friction?(1 Mark)

(Ans) Friction is the force that resists motion when the surface of one object comes into contact with the surface of another.

(Q.) Explain the term Non-contact Forces?(1 Mark)

(Ans) A non-contact force is any force applied to an object (or body) by another body that is not in direct contact with it like magnetic force, gravitational force etc.

(Q.) What is the Magnetic Force?(1 Mark)

(Ans) Magnetic force is the force which works between magnets and magnetic objects or magnet and magnet. It can be attractive or repulsive.

Q.) What is the Electrostatic Force?(1 Mark)

(Ans) The force exerted by a charged body on another charged or uncharged body is known as electrostatic force.

(Q.) What happens when we press a rubber ball placed on a table? (1 Mark)

(Ans) When a force is applied on a rubber ball, force changes it shape.

(Q.) How a force of friction arises?(1 Mark)

(Ans) The force of friction arises due to contact between surfaces; it is also an example of a contact force.

(Q.) Which device is used to measure the weight of a body?(1 Mark)

(Ans) A spring balance is a device which is used to measure the weight of a body.

Q.) Define the weight of a body. Also write its S.I. unit.(1 Mark)

(Ans) The weight of a body on the earth is actually the force with which the earth attracts it. It depends on the mass of the body. Its S.I. unit is Kg m/s^2 or N.

(Q.) What are the effect of force?(2 Marks)

(Ans) The effect of force are as follows:

1. It can change the direction of motion
2. It can increase the speed of motion.
3. It can decrease the speed of motion.
4. It can stop the moving object.
5. It can start motion in a stationary object.

Q.) What is the Gravitational Force?(2 Marks)

(Ans) Every object in the universe, whether small or large, exerts a force on every other object. This force is known as the gravitational force.

Q.) What is the Pressure?(2 Marks)

(Ans) The force acting on a unit area of a surface is called pressure.

Pressure = force / area.

(Q.) What is the Atmospheric Pressure?(2 Marks)

(Ans) The pressure exerted by atmosphere on our body is known as atmospheric pressure.

(Q.) Define the term Gravity?(2 Marks)

(Ans) Gravity is the force that causes two particles to pull towards each other. Gravitation is a natural phenomenon by which all objects with mass attract each other, and is one of the fundamental forces of physics.

(Q.) How does a person move forward during swimming? (2 Marks)

(Ans) When a person swims due to action and reaction force. He pushes the water in the backward direction with his hand, this is action and water pushes the person in the forward direction with equal force this is reaction.

Q.) What happens when a force acts on an object?(3 Marks)

(Ans) when a force is applied on an object it can:

1. Change the shape and size of the object,
2. Change the speed of object if moving,

(a) Increase speed,

(b) Decrease speed.

3. Start motion in a stationary object.

4. Change the direction of motion.

(Q.) What do you mean by the force of friction? How can it be minimised?(3 Marks)

(Ans) Frictional force is a force, which always opposes the motion of a body over a given surface. Whenever a body actually moves over a surface, frictional force appears in a direction opposite to the motion and this opposite force tries to oppose the motion of body. By using the lubricants we can reduce the friction.

(Q.) Why does an empty can not cave in normally?(3 Marks)

(Ans) An empty can does not cave in normally because it is full of air and the pressure of air on the surface of the can is balanced by the pressure of air on its inner surface.

(Q.) Why is the moon's force of gravity less than that of the earth?(3 Marks)

(Ans) Gravitational force depends on the masses of the two bodies concerned. Earth's mass is much greater than that of the moon. That's why the earth's force of gravitation is much greater than that of the moon.

Q.) Mention three types of forces which can act from a distance.(3 Marks)

(Ans) hree types of forces which can act from a distance are:

1. Magnetic force.2. Electrostatic force.3. Gravitational force.

(Q.) Calculate the weight of 1 Kg mass. (3 Marks)

(Ans) m = 1 Kg, g = 9.8 m/s^2

Weight = Attraction force on a body by earth.

= m x g (Acceleration due to gravity)

W = 1 x 9.8 = 9.8 N

Weight of 1 Kg mass is 9.8 N.