



CLASS :8

Subject: physics
Topic: Force and Pressure

Date :- 15. 06 .2020
Time:- 30 min

Worksheet No.:10

[Read and learn the notes thoroughly. Copy the questions and solve them on a sheet of paper date wise. Keep the WorkSheet prepared in a file to be submitted on the opening day]

PRESSURE

The force acting per unit area of a body is known as pressure

If P = pressure

A = surface area

F. =. Force

Then

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

$$\text{or. } P = \frac{F}{A}$$

Unit of pressure

C. G. S unit - dyne / square centimetre

S. I unit. - newton / square metre

- The S. I unit of pressure is pascal p(pa)

Pascal = When a force of one newton acts on a surface area of one square metre then the pressure is known as one pascal.

FACTORS EFFECTING PRESSURE

- The magnitude of force acting on the body
- The surface area of the body

How pressure depends on force

If surface area remains constant the pressure is directly proportional to the magnitude of force acting on the body. If force increases then pressure increases and if force decreases then pressure decreases.

How pressure depends on surface area of a body

If the force acting on a body remains constant then pressure acting on a body is inversely proportional to the surface area of the body. If surface area increases then the pressure decreases and if surface area decreases then pressure increases.

Answer the following question

- 1) Define pressure.
- 2) State and define the S. I unit of pressure
- 3) What are the factors on which pressure depends.
- 4) How pressure depends on force acting on a body
- 5) How pressure depends on surface area of a body.

