

VIDYA BHAVAN, BALIKA VIDYAPEETH
SHAKTI UTTHAN ASHRAM, LAKHISARAI, PIN:-811311

SUBJECT:- PHYSICS

CLASS:- IXTH

DATE:13/07/XX

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 3. (GRAVITATION PART-2)(BASED ON NCERT SYLLABUS)

Question 15:

What is meant by the term 'buoyancy' ?

Solution :

The tendency of a liquid to exert an upward force on an object placed in it, is called buoyancy.

Question 16:

What causes buoyant force (or upthrust) on a boat ?

Solution :

The buoyant force on a boat is caused by the pressure of water 'pushing up' on the bottom of the boat.

Question 17:

Why does ice float in water ?

Solution :

The density of ice is less than that of water, so ice floats in water.

Question 18:

What force acting on an area of 0.5 m² will produce a pressure of 500 Pa ?

Solution :

$$\begin{aligned} \text{Pressure} &= \frac{\text{Force}}{\text{Area}} \\ \text{Force} &= \text{Area} \times \text{pressure} \\ &= 0.5 \times 500 \\ &= 250\text{N} \end{aligned}$$

Question 19:

What is the scientific name of the 'upward force' acting on an object immersed in a liquid ?

Solution :

Buoyant force or upthrust