



KALPAVRUKSHA MODEL SCHOOL_

Answers of Online class Assignments-4

Class: VIII

Sub: Physics

Date: 8.9.2021

Topic: PRESSURE

I .Answers:

1. What is atmospheric pressure due to?

ANS: The atmospheric pressure is due to the weight of all the air above the Earth.

2. What is the effect of altitude on atmospheric pressure?

ANS: The atmospheric pressure at a place is the force exerted by the weight of the air column above that place. As we go up, the length of the air column above us decreases. This means its weight decreases and therefore the atmospheric pressure is smaller at higher places (than the sea level).

3. Why is it necessary for astronauts to wear pressurized suits?

ANS: If the pressure of the atmosphere changes suddenly, the blood vessels in our body will burst due to the pressure of the blood and other fluids inside. That is why it is necessary for the astronauts to wear pressurized suits.

4. Explain why balloons burst when too much air is blown into it?

ANS: The balloon inflates due to the pressure of the air inside it. If you fill too much air in the balloon, the balloon bursts because the pressure on the walls of the balloon increases beyond which its walls can withstand. Air also has weight and hence exerts pressure in both upward and downward direction.

5. How would you demonstrate the presence of atmospheric pressure?

ANS: To show the presence of atmospheric pressure, fill the tumbler with water to the brim. Cover the tumbler with the cardboard piece. Place the palm of your hand over the piece of cardboard, and quickly invert the tumbler. Slowly remove your hand supporting the piece of cardboard. You will observe that the cardboard piece will not fall. Atmospheric pressure provides enough force to support a full glass of water.

6. Where is the pressure due to water higher in the sea – near the base or at the top?

ANS: In sea, near base or at top. Pressure tends to decrease with altitude and increase with depth. So pressure due to water in sea is higher at bottom.

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