THE INDIAN SCHOOL, KINGDOM OF BAHRAIN
PHYSICS ASSIGNMENT (2013-2014) – CLASS IX

THRUST AND PRESSURE

1. A ship made of iron floats on water, but an iron needle sinks. Why?

2. What is apparent weight?

3. There is no overflow of water, when ice cube floating in a tumbler full of water melts completely. Why?

4. State Archimedes' principle. Write two applications of this principle.

5. Why do needles have pointed tips?

6. Give the unit of relative density.

7. Name two physical quantities that may alter upthrust.

8. Which water will provide more buoyant force, sea water or river water?

9. When a floating body partially immersed, is pressed down a little, which of the two will increase; Weight or upthrust? Explain.

10. What is the work done by centripetal force in a uniform circular motion?

11. A man carries 10 kg mass without altering the height. What is the value of work done against gravity?

12. Relative density of silver is 10.8. The density of water is 10^3 kg/m^3. What is the density of silver in SI unit?

13. The volume of 100 g of a substance is 20 cm^3. If the density of water is 1 g cm^{-3}, will the substance float or sink?

14. What is the work done by the gravitational force on an object, when it moves in a straight line?

15. The volume of a 700 g sealed packet is 350 cm^3. Will the packet float or sink in water, if the density of water is 1 g/cm^3. What will be the mass of the water displaced by this packet?