FLOATING BODIES

1. Why do some objects float on the water? And some sink? (AS1)

2. Explain density and relative density and write their formulae. (AS1)

3. Explain buoyancy in your own words. (AS1)

4. How can you find the relative density of a liquid? (AS3)

5. Draw the diagram of a mercury barometer. (AS5)

6. A solid sphere has a radius of 2 cm and a mass of 0.05 kg. What is the relative density of the sphere? (AS1) [Ans: 1.49]

7. A small bottle weighs 20 g when empty and 22 g when filled with water. When it is filled with oil it weighs 21.76 g. What is the density of oil ? (AS1) [Ans: 0.88 g/cm3]

8. An ice cube floats on the surface of water filled in glass tumbler (density of ice = 0.9 g/cm3). Will the water level in the glass rise? When the ice melts completely (AS1)

9. Find the pressure at a depth of 10m in water if the atmospheric pressure is 100kPa. [1Pa=1N/m2] [100kPa = 105 Pa = 105 N/m2 = 1 atm.] (AS1) [Ans: 198 kPa]
5. How can you appreciate the technology of making ships those float on water using the material which sink in water ? (AS6)

10. Can you make iron to float in water? How? (AS3)

11. Where do you observe Archimedes principle in daily life? Give two examples.(AS7)

12. Do all objects that sink in water, sink in oil? Give reason. (AS1)

1. Unit of relative density is [ ]
a) g/cm^3 b) cm/g^3 c) N/m^2 d) No units

2. The instrument used to measure the purity of milk is [ ]
a) Barometer b) Hygrometer c) Lactometer d) Speedometer

3. If P0 = Pressure, ñ = Density, h= height, and g = accelaration due to gravity then the atmospheric pressure = [ ]
a) P0 = ñhg b) P = mgh c) P = vgh d) P = ½ mgh

4. The first barometer with mercury was invented by [ ]
a) Pascal b) Archimedis c) Newton d) Torecelli

5. The hydrolic jockey which is used in automobile work shops, works on the principle of [ ]
a) Archimedes b) Pascal c) Torecelli d) Newton

6. The density of water at 250C is [ ]
a) $1g/cm^3$ b) $2g/cm^3$ c) $3g/cm^3$ d) $0.99g/cm^3$