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Question 1:
Why is it difficult to hold a school bag having a strap made of a thin and strong string?
Answer 1:
It is difficult to hold a school bag having a thin strap because the pressure on the shoulders is quite large. This is because the pressure is inversely proportional to the surface area on which the force acts. The smaller is the surface area; the larger will be the pressure on the surface. In the case of a thin strap, the contact surface area is very small. Hence, the pressure exerted on the shoulder is very large.

Question 2:
What do you mean by buoyancy?
Answer 2:
The upward force exerted by a liquid on an object immersed in it is known as buoyancy. When you try to immerse an object in water, then you can feel an upward force exerted on the object, which increases as you push the object deeper into water.

Question 3:
Why does an object float or sink when placed on the surface of water?
Answer 3:
If the density of an object is more than the density of the liquid, then it sinks in the liquid. This is because the buoyant force acting on the object is less than the force of gravity. On the other hand, if the density of the object is less than the density of the liquid, then it floats on the surface of the liquid. This is because the buoyant force acting on the object is greater than the force of gravity.