

Grade- VIII

PHYSICS

1. A spring scale or spring balance or newton meter is a type of mechanical force gauge or weighing scale. It consists of a spring fixed at one end with a hook to attach an object at the other. ... Therefore, the scale markings on the spring balance are equally spaced. A spring scale cannot measure mass, only weight.
2. Two objects having streamlined body to reduce friction are....
 - ships or boats
 - aero planes
3.
 - A. Static friction: Static friction is the friction which comes into play when surfaces of the objects are at rest relative to each other even there is an external force acted upon Sliding friction: Sliding friction is the friction which comes into play when the surface of one object moves relative to the surface of another object. For a given pair of objects the static friction is always greater than the sliding friction
For example:
 1. Static friction arise when you push the bag on the flat surface
 2. Sliding friction arises when you push the same bag over an inclined surface.
 - B. **Spontaneous combustion** is the ignition of the substances due to the rapid oxidation of its own materials. There is no requirement of heat of external sources. **Rapid combustion** on the other hand releases large amount of heat and light energy. Explosion and the firecrackers is the best example of rapid combustion.
4.
 - A. When the friction increases, there are various chances of the vehicle falling down due to many reasons. Like, skidding or slipping.
It is also designed in a way such that the water is expelled from the underneath of the tyres so that it prevents hydroplaning
So these are the reasons why tires have got grooves on their surfaces.
 - B. Lubricating oil carries away heat and contaminates while preventing damaging surface – to surface contact. It's the lifeblood of every production machine and a

well – maintained lubrication system keeps machinery healthy. That means fewer breakdowns and stoppages and less part – to –part variation, so quality improves.

C. A "body shape" which offers very little resistance to the flow of air or water around it is called as streamlined shape.

An aero plane or a car has a streamlined shape for the following reasons:

- In order to reduce the fluid friction or drag that it encounters when flying through the sky.
- To increase the efficiency of vehicle by reducing the loss of energy which is required to overcome drag
- In order to improve speed.

5. Conditions necessary for Combustion There are three conditions which are necessary for combustion to take place.

1. Presence of a combustible substance. That is, a substance which can burn.
2. Presence of a supporter of combustion like presence of oxygen in air.
3. Heating the combustible substance to its ignition temperature.

6. Only those substances, which vapourise during burning, produce flames. For example, kerosene oil and molten wax rise through the wick and are vapourised during burning and form flames.

On the other hand, those substances which do not vapourise during burning do not give flame. For example, when coal is burnt, it does not produce a flame. The main reason why coal does not burn with a flame is that it does not vapourise during burning

7. Fossil fuels should be used judiciously because they are exhaustible and are present in limited amount in nature. Also the formation of fossil fuels takes millions of years. When the fossil fuels are burnt it causes pollution. The fossil fuels are not present evenly on the earth. Hence the availability of fossil fuels is also less. Therefore, they should be used judiciously.