

Class XI Physics NOTES

very important in describing the natural phenomena quantitatively. Conservation laws are in fact important tools of analysis.

In Classical Physics, we often deal with the following conservation laws:

1. Law of conservation of energy
2. Law of conservation of linear momentum
3. Law of conservation of angular momentum
4. Law of conservation of charge

A brief discussion of these laws is given here:

(a) Law of conservation of energy

"The sum total of energy of all kinds in this universe remains constant". Energy can neither be created nor it can be destroyed, it can only be transformed form one form to the other or transported from one place to the other, but the total amount of energy of never changes".

(b) Law of conservation of linear momentum:

"In the absence of an external force, the linear momentum of a system remains unchanged."

(c) Law of conservation of angular momentum

We know that a rotating body has inertia. Therefore, such an object also possesses momentum associated with its rotation.