

UG - Semester - 3 - Physics

MJC-3 - Physics

Thermodynamics

Definition - Thermodynamics deals with the relation of heat to mechanical work and other forms of energy. i.e - Conversion of mechanical work into heat.

Thermodynamics has innumerable applications in the study of physics, chemistry and Engineering. The study of energy relations and manner in which energy changes take place are based upon two general laws - the first and the second law of thermodynamics.

Thermodynamic Systems :-

A system is defined as a region in space or quantity of matter bounded by some closed surface.

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The State of thermodynamic system can be represented by specifying its pressure P , volume V , temperature T and entropy S . These variables are called thermodynamic co-ordinates of the system.

There are three classes of systems, namely -

(i) The open system

(ii) The closed system

(iii) The isolated system

Open System - A system which can exchange matter and energy with the surrounding is known as an open system.

Closed System - A system which can exchange only energy with the surrounding is called closed system.

Isolated System - A system which is not influenced in any way by its surrounding is known as an isolated system.