# **BASIC**

# BASIC THERMODYNAMICS

LECTURE - 1
(INTRODUCTION & BASIC CONCEPTS)

THERMODYNAMICS LECTURE - 1 Evaluation only.

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(INTRODUCTION & BASIC CONCEPTS) 04-2022 Aspose Pty Ltd.

Mechanical Engineering Simplifie

## WHAT IS THERMODYNAMICS?

- ¢ Thermodynamics is branch of science which deals with energy transfer & its effects on properties (physical & chemical) of the substance.
- ¢ Amount of heat (or work) transfer taking place while arriving at one state from another is the main concern in thermodynamics

SYSTEM & SURROUNDINGS

**SYSTEM** 

It is a fixed mass or region in a space (control volume) where our study is focussed.

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**SURROUNDINGS** 

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Everything external to the system is the surrounding

(That part of the surrounding which is effected by the system is known as the immediate surrounding)

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# TYPES OF SYSTEMS

# **CLOSED SYSTEM**

It is a type of system in which onlysenergyanteractions & no mass interactions take place.

Ex. Piston-cylinder arrangement without valves

# **OPEN SYSTEM**

It is a type of system in which bothsenergy: Semassunteraction takes place on only.

Ex. Piston-cylinder arrangement with aspose. Slides for .NET Standard 2.0 22.8. Copyright 2004-2022Aspose Pty Ltd.

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Ex. Hot coffee or tea kept in a well insulated thermos flask, universe

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