My Thermal & Statistical Physics Notes
for Jomo Kenyatta University of Agriculture and Technology

Gitonga B. M'Ikiara

May 17, 2024

Contents

List of Figures

Introduction

Thermal and Statistical Physics is the best of the best of the Sciences and I aim to cover a lot in my Notes.

Cheers. Gitonga B. Ikiara

Chapter 1

Heat and Temperature

1.1   What is Heat?

We could think of heat as:

- The transfer of thermal energy from a region of high thermal energy to a region of low thermal energy, provided that the two regions are in contact, is known as **heat**.

- The transfer of thermal energy between molecules within a system

The SI unit for Heat is the joule J

> **Just a heads up...**
>
> A body can only lose or gain heat but not possess heat as heat is a measure of thermal energy and not a property of matter.

1.2   What is Temperature?

We can define temperature as:

- (*layman*) the hotness or coldness of a body.

- (*more technical*) a measure of the <u>mean</u> kinetic energy of a body in a thermal energy system.

The SI unit for Temperature is the kelvin K.

Appendices

Bibliography