❧ *A JEE Notebook* ❧

Part 2: on Physics

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Contents

Preface

§1 The Philosophy

First, before jumping to any content, I shall discuss the philosophy behind these notes. These notes are made because I did not like pen-paper notes, these have version control, can be easily rewritten are more accessible(on phone/pc and if needed, on print).

Another thing to note is that these notes follow a specific philosophy, in that they try to be expository. They are meant to explain things. I have noticed that books often talk circularly, create redundancies, and etc.

To combat this, I have tried to clearly lay out everything here. Also, because of how books are made, generally in various volumes, content often goes repeated. These notes will try to remove that.

Lastly, I have often added some sort of additional non-JEE relevant content in many places, because 1) JEE is not the only thing I care for, 2) I am particularly interested in Mathematics/Physics so I study extra stuff, 3) They often help in exposition and better understanding. These are, however, mentioned in the text, and you can easily skip them.

Happy learning!

Prereq Mathematics

CHAPTER 0

Unit and Dimensions

Part **I**

Mechanics

CHAPTER 1

Kinematics

Kinematics is the study of motion without concerning its cause. It allows us to calculate and find out the evolution of a body. Everything in our world undergoes motion, one way or the other. To begin our study of motion, let us first concern ourselves with some definitions.

§1.1 Reference Frame and Point Particle

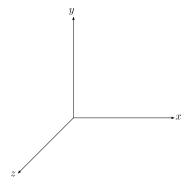Motion of any object is considered to relative to a reference frame. We consider motion of any body with respect to any other body or co-ordiante frame.

Figure 1.1: A Reference Frame