

# Assignment 4

ID2090 Students

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### 1 Introduction

Add a line to include your text as illustrated in the comment below.

### 2 ME19B164

Given below is my favourite equation from physics.

$$S_{gen} \geq 0 \tag{1}$$

This is one of the equivalent formulations of the Second Law of Thermodynamics. It states that the entropy generated in a process is either equal to zero (reversible) or greater than zero (irreversible). Entropy can be generated by friction, which is useful work converted to heat, or heat transfer across boundaries due to a finite temperature difference. Equation ?? is also known as the increase of entropy principle. A process must proceed in the direction that complies with this principle, otherwise, it is impossible. Entropy generation is a quantitative measure of the irreversibilities associated with a process. It is used to establish criteria for the performance of engineering devices.