

## **Project Report:**

### **Abstract:**

In this section, the students should focus on the following major points:

1. The first two to three lines should generally talk about the domain, field, or problem itself. For example, if someone is working purely on the electromechanical system, the first line of the abstract would be “In this 21st century, the electromechanical systems are playing a pivotal role in the multidisciplinary engineering problems”.
2. The third line should describe the problem and why the students addressed it. I recommend that the students provide a concise explanation of the overall dynamic system.
3. After that, the students should potentially focus on the tangible results of the project.
4. The last statement of the abstract should be the concluding remarks followed by the future recommendations.

The total number of words for the Abstract should not be more than 320.

### **Graphical Abstract:**

This should include a visually appealing figure (either in the form of a block diagram or a schematic).

### **List of Symbols**

The students should consider a table, comprising two columns and multiple rows. In the first column, they should include the symbol, and in the second column, they should include the explanation of that symbol as shown below:

<b>List of Symbols</b>	
$\alpha$	Angular Acceleration

## **1. Introduction**

In this section, students are strongly encouraged to incorporate all theoretical interpretations from the published articles that informed their model development. Furthermore, students should include subsections to clearly define any terminology relevant to the project.

## **2. Mathematical Model**

The first paragraph of this section should emphasize all the key details of the entire project, including a comprehensive explanation of the sub-systems. Students may refer to Figure 1, which is expected to be the graphical abstract.

It must be noted that each equation should be derived with clear explanations and assigned equation numbers. It is essential to provide enough detail to understand the dynamics of the system thoroughly.

### **2.1. Controllable Parameters**

In this section, students must identify all controllable factors they will change to analyze the system's output response.

## **3. Pseudo Code**

The students must consider at least three major results of the project and write pseudo code for them. I will explain this further during lecture hours.

## **4. Results and Discussion**

The first paragraph of this section should generally talk about the results of the project. For example, you can say that “In this section, six controllable factors have been varied to investigate the mechanical output of the motor”.

### **4.1. Influence of glass thickness on the temperature and rate of change of the temperature.**

In each subsection, students must first provide an explanation or interpretation, followed by the relevant graphs. It is important to note that the instructor will not accept general graphs generated from MATLAB. All graphs should be formatted according to the formatting we have established during the lab sessions.

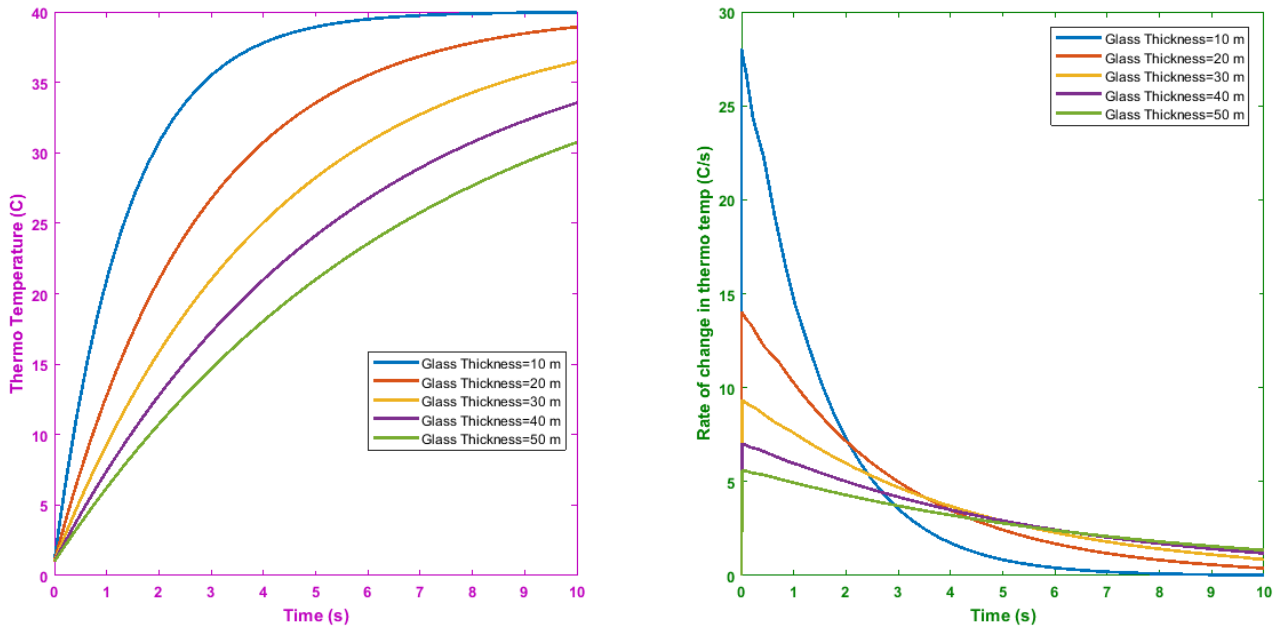


Figure 2: Dynamic trends of the thermometer

## 5. Cross Validation (optional)

This section is optional; however, it is highly recommended to compare the results of the proposed project with the available literature.

## 6. Conclusion

The students should conclude the report with tangible remarks, overall findings, and adequate future recommendations.

## References

Deliverables:

1. Project Report (Both Word and PDF)
2. M-Files of the overall analysis
3. M-Files of all the figures (Graphs: The names of these files should refer to the figure number as I would be interested in reexploring the figures)
4. Presentation (6-7 Slides, Explaining the overall project attributes)
5. Viva Voce (If needed)

