Lance Go

ME 333

March 30, 2022

**Homework #10**

**#5) Turn in your best plots of following the step and cubic trajectories in Figure 28.5**

**with the load attached. Indicate the control gains you used, as well as their units.**

*All the Y-axis for both of the graphs should be in degrees, as well as the average error. It is not measuring current in mA.*

Step trajectory, best attempt:

Chart, line chart

Description automatically generated

|  |  |  |
| --- | --- | --- |
|  | **Current PI Control (mA)** | **Position PID Control (degrees)** |
| **Proportional Gain** | 0.7 | 50 |
| **Integral Gain** | 1.1 | 0.0055 |
| **Derivative Gain** | N/A | 1200 |

Cubic trajectory, best attempt:

Chart, line chart

Description automatically generated

|  |  |  |
| --- | --- | --- |
|  | **Current PI Control (mA)** | **Position PID Control (degrees)** |
| **Proportional Gain** | 0.7 | 40 |
| **Integral Gain** | 1.1 | 0.005 |
| **Derivative Gain** | N/A | 1200 |

**There is too much code to upload to canvas, so I am also adding a link to the GitHub page here. It is public now, but I will immediately make it private as soon as the assignment is graded.**

**Link** [here](https://github.com/lancego2023/ME333/tree/main/Final)