EGB345 Control and Dynamic Systems JJF/21

**Servo Motor System Identification Report**

Instructions: replace the yellow highlighted text with your own words and the requested plots (that is, delete the yellow text). Note the submitted must be saved from MATLAB (not screen captures).

Authorship details

|  |  |
| --- | --- |
| Author | *Don Misura Minduwara Kaluarachchi , n10496262* |
| List others providing assistance |  |

Text and plot answers

|  |  |
| --- | --- |
| Question 1 [Text] | What were your randomly assigned values alpha and Km? Please report both values to at least 10 significant figures (use “format long” command so MATLAB displays enough significant figures).  Km =  Alpha = |
| Question 2 [Text] | From step 1 above, what was your estimate of the model parameters alpha and Km? Please report your estimate to 3 significant figures. How close was it to the true values? |
| Question 1 [Plot] | Plot (‘png’ or ‘jpg’) of yn\_random (plotted in red) **on the same plot** and the shifted/fixed data, yn\_random\_fixed (plotted in blue) |
| Question 2 [Plot] | Plot (‘png’ or ‘jpg’) of yn\_own\_fixed (plotted in red) and simulated response from your estimated model (plotted in blue) **on the same plot**. |
| Question 2  [MATLAB] | Paste your MATLAB code for estimating parameters. |
| Question 3 [Text] | What was your estimate of the model parameters that generated the test data set EGB345TestData? Please report your estimate to 3 significant figures. |
| Question 3 [Plot] | Plot (‘png’ or ‘jpg’) both your estimated model data (plotted in blue) versus the data in EGB345UnknownData (plotted in red) **on the same plot**. |
| Question 3 [Text] | Given how accurately your MATLAB code worked to estimate your randomly assigned alpha and Km, how accurate (use percentages) do you think your estimate will be for the the model parameters that generated data? |