

REPORT

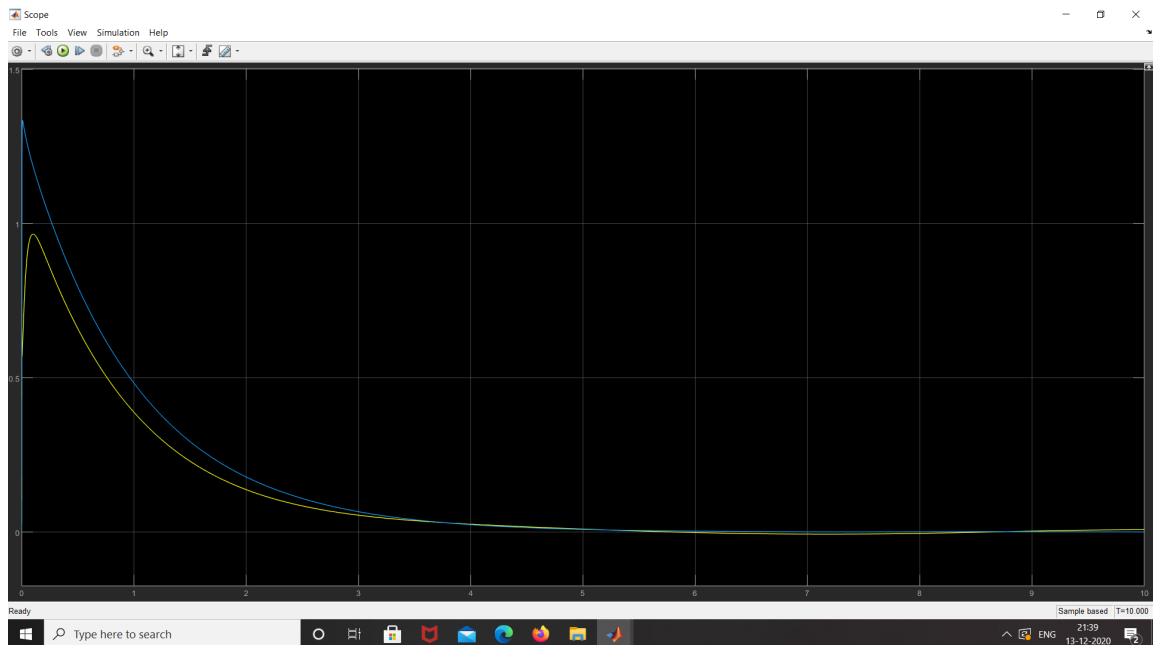
GRAPHS

1) first part (Model - based)

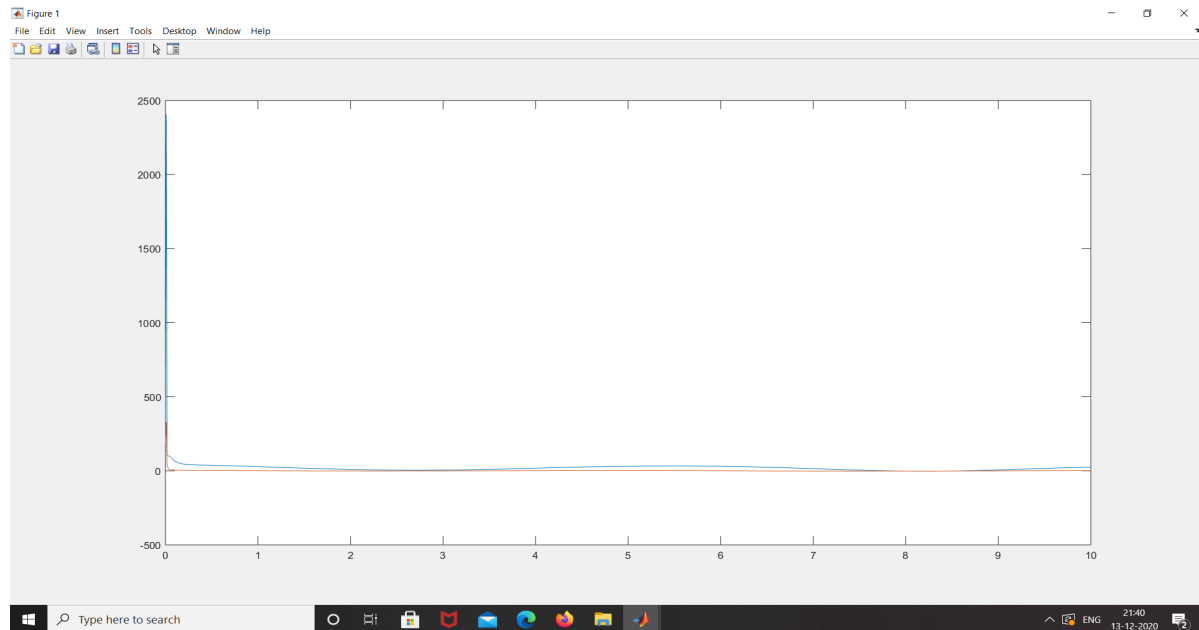
i) e vs t



ii) \dot{e} vs t

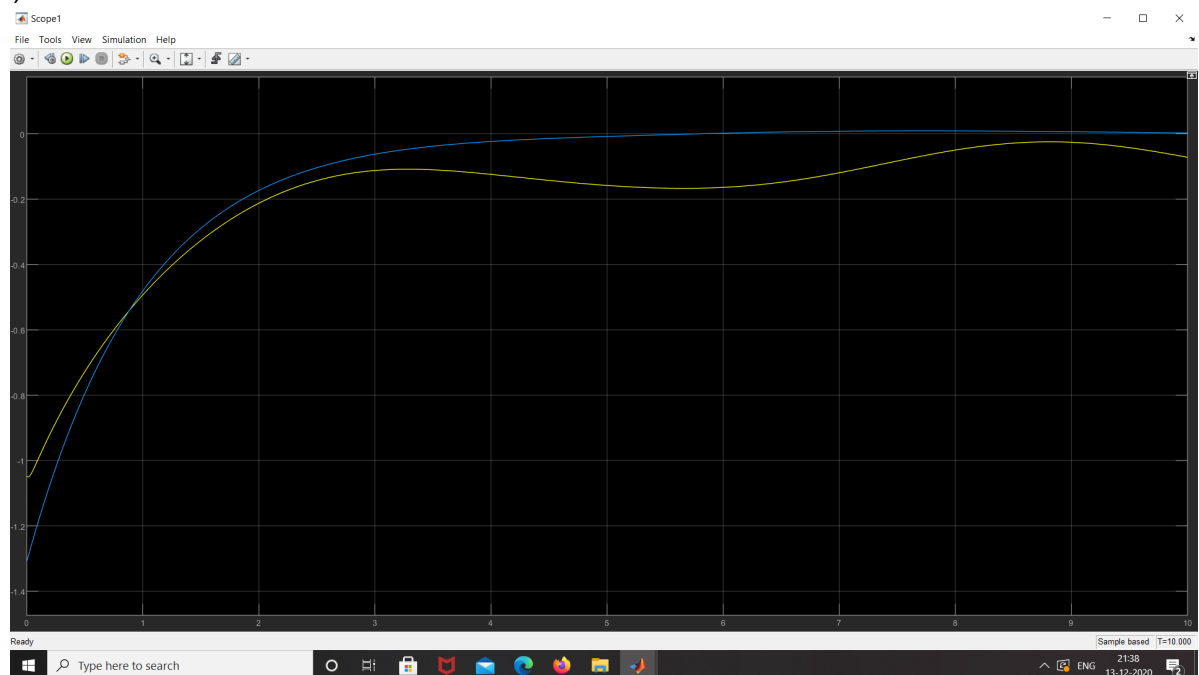


iii) t_{ou} vs t

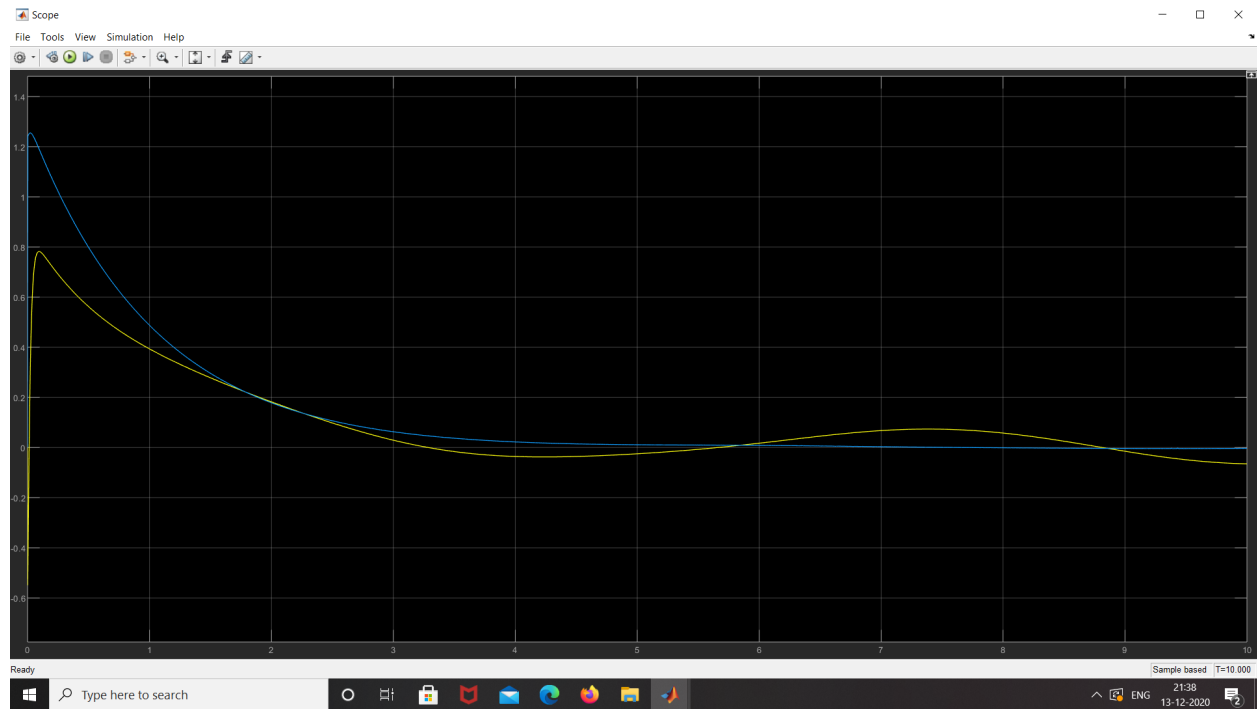


Second part (Proportional derivative)

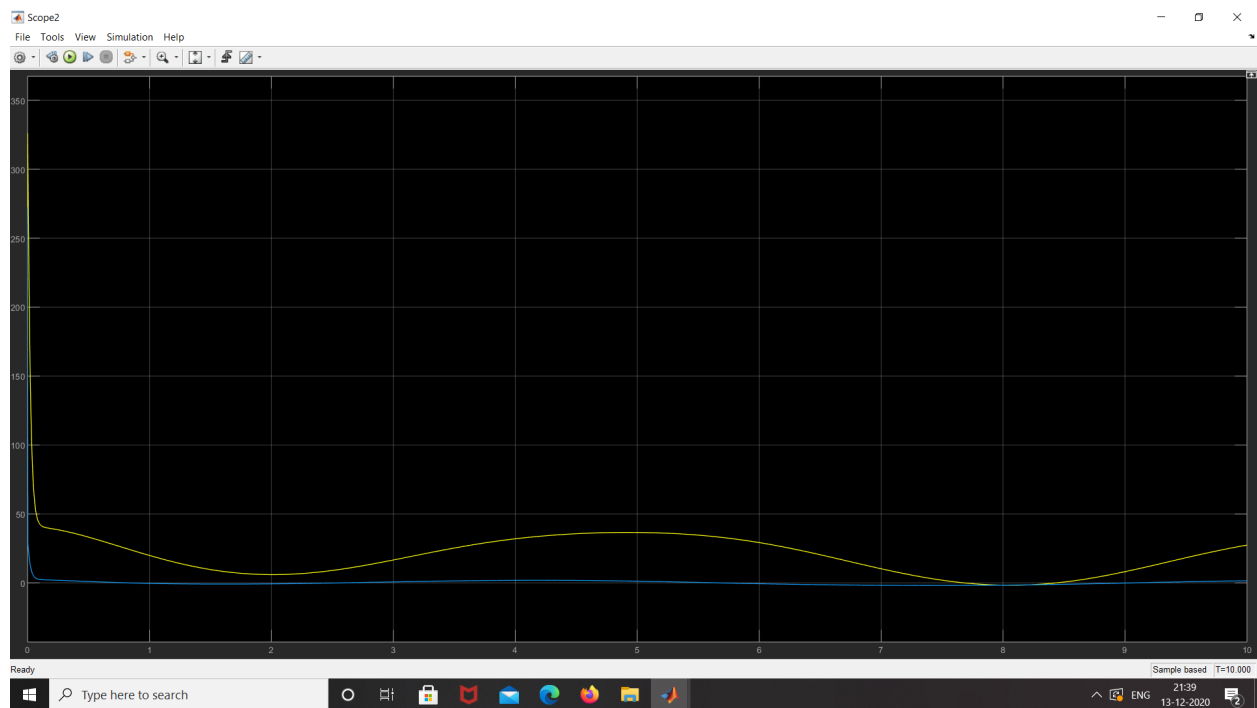
i) e vs t



ii) \dot{e} vs t



iii) t_{ou} vs t



COMPARISONS

Model - based controller has a better accuracy as evident from the comparison of e vs t graphs. Model - based controller requires lesser control effort in comparison to PD controller as can be seen in the u vs t graph.

Model-based controller is better one in terms of the tracking accuracy and the control effort. Also, the time required for e to become zero is less in model-based so it also indicates a good point for model based.