Control System Laboratory Report

Name and ID no. of the Student:

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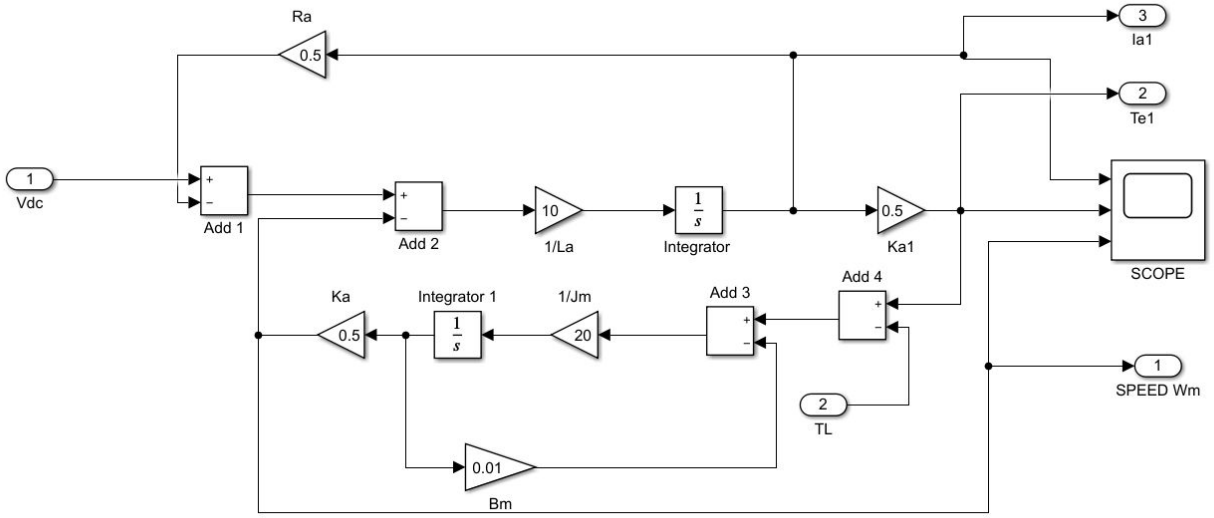
Title of the Experiment:

MATHEMATICAL MODELLING OF PHYSICAL SYSTEMS (DC MOTOR)

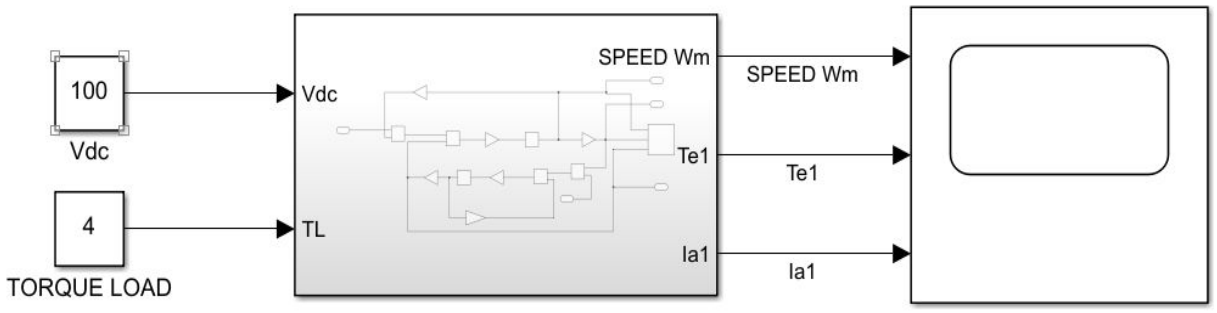
Model/Simulation:

SIMULINK

System Model:

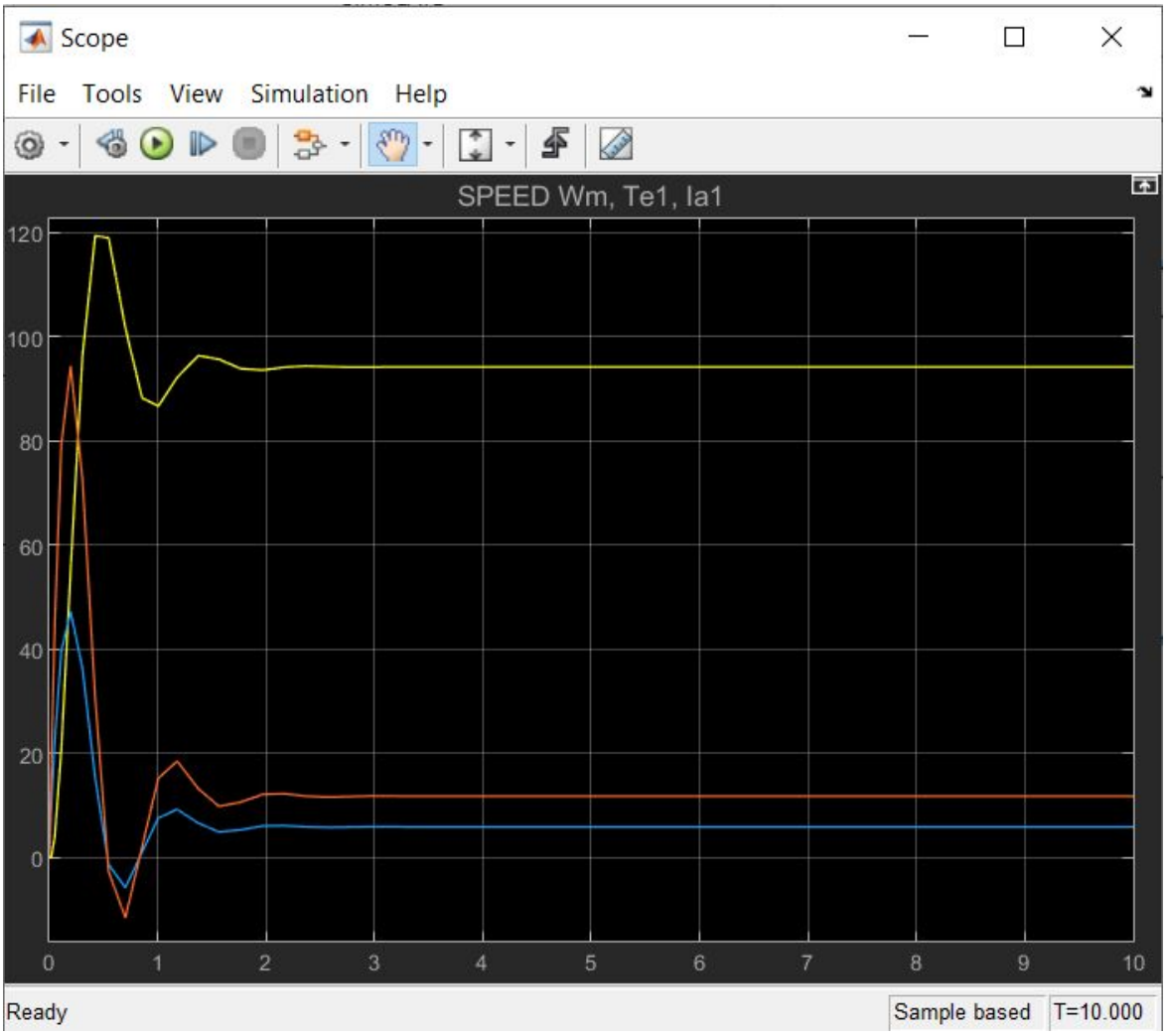


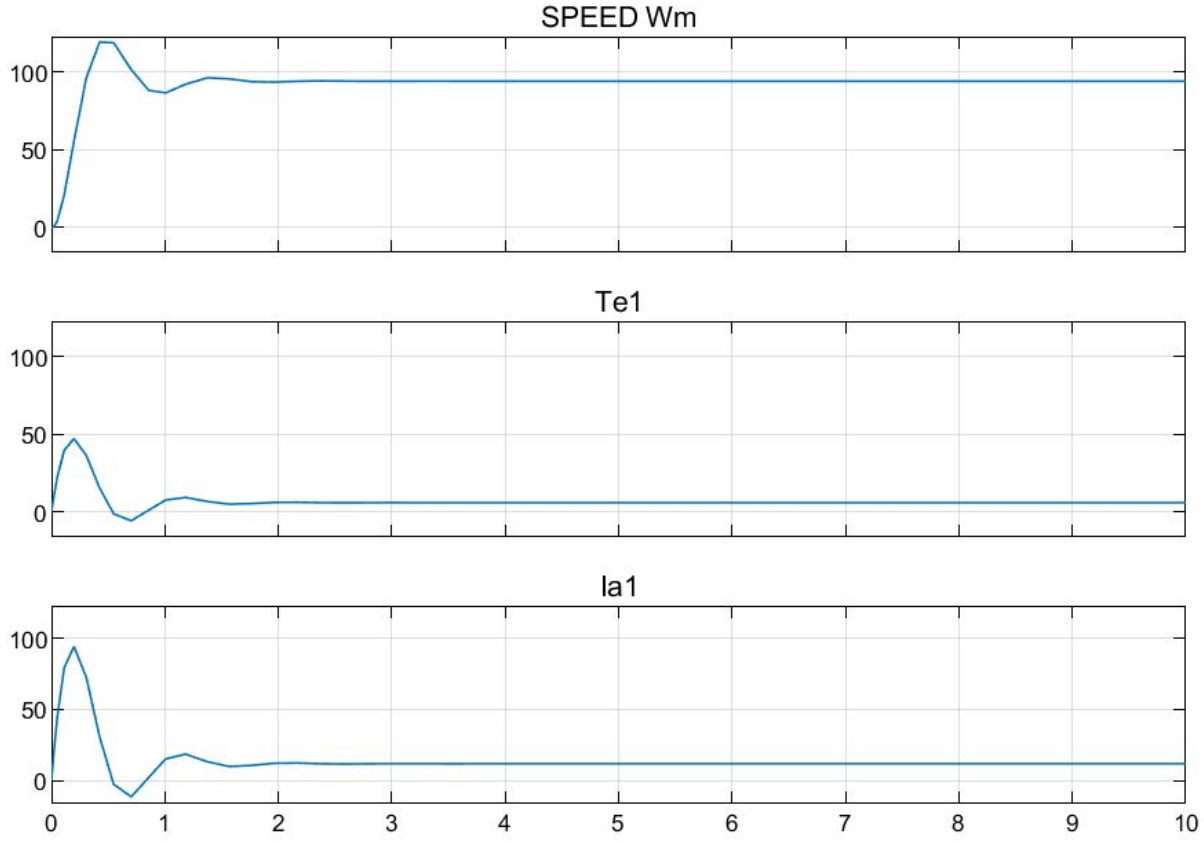
Sub-System Model:



Results:

Results from Scope:





Conclusive remarks:

Modelling of a DC Motor using MATLAB Simulink with the given parameters from the given Specification sheet by constructing a Mathematical model.

The output characteristics like Speed (W_n) are within the specified range (i.e. below) which can be observed from the graph, since the maximum speed attained by DC Motor is around 120 r.p.m while the rated motor speed is 188 r.p.m.

As given in the Specification Sheet T_a is half of I_a (Armature Current)

[$T_a = 0.5*I_a$] which can also be observed from the Simulation results.