NED University of Engineering & Tech. Electrical Engineering Department
Spring Semester 2020 TE-ME / TE-EE / TE-EL

Lab Session 06

Exercise:

Question 1:

Create a Simulink model for a DC motor with following parameters,

```
J = 10
b = 5
R = 5
L = 0.01
K = 1
```

Find the step response of the angular speed of the motor using Simulink model. Export simulation time and angular speed of the motor to workspace using `To Workspace` block present in the Simulink library. Plot the step response of the angular speed of the motor by using `plot` command and find the time constant of graph using data cursor. Comment on why the time constant of the angular speed curve is approximately equal to the mechanical time constant.

Write only comments below this line. Attach properly cropped image of simulink model with this document along with graph.

COMMENTS: