

**Electrical Engineering Department**

**Simulation Lap**

**Assignment #2**

**DC Motor**

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**Student Name:**

The Block Diagram Of The DC Motor and it was saved to MDL File



The Code on the Mfile :

**j=0.2e-3 ;**

**b=0.001;**

**K=0.4;**

**resistance=0.60;**

**L=20e-3;**

**[A,B,C,D] =linmod('MotorM')**

**[num,den] = ss2tf(A,B,C,D)**

After the evaluation is done:

**Warning: Using a default value of 0.08 for maximum step size. The simulation step size will be equal to or less**

**than this value. You can disable this diagnostic by setting 'Automatic solver parameter selection' diagnostic to**

**'none' in the Diagnostics page of the configuration parameters dialog**

**> In dlinmod at 172**

 **In linmod at 60**

**A =**

 **-5 2000**

 **-20 -30**

**B =**

 **0**

 **50**

**C =**

 **1 0**

**D =**

 **0**

**num =**

 **1.0e+005 \***

 **0 0 1.0000**

**den =**

 **1.0e+004 \***

 **0.0001 0.0035 4.0150**

And Then To The Transfer Matrix Of A was submitted to find the Observer representation:

**>> A'**

**ans =**

 **-5 -20**

 **2000 -30**

**>>**