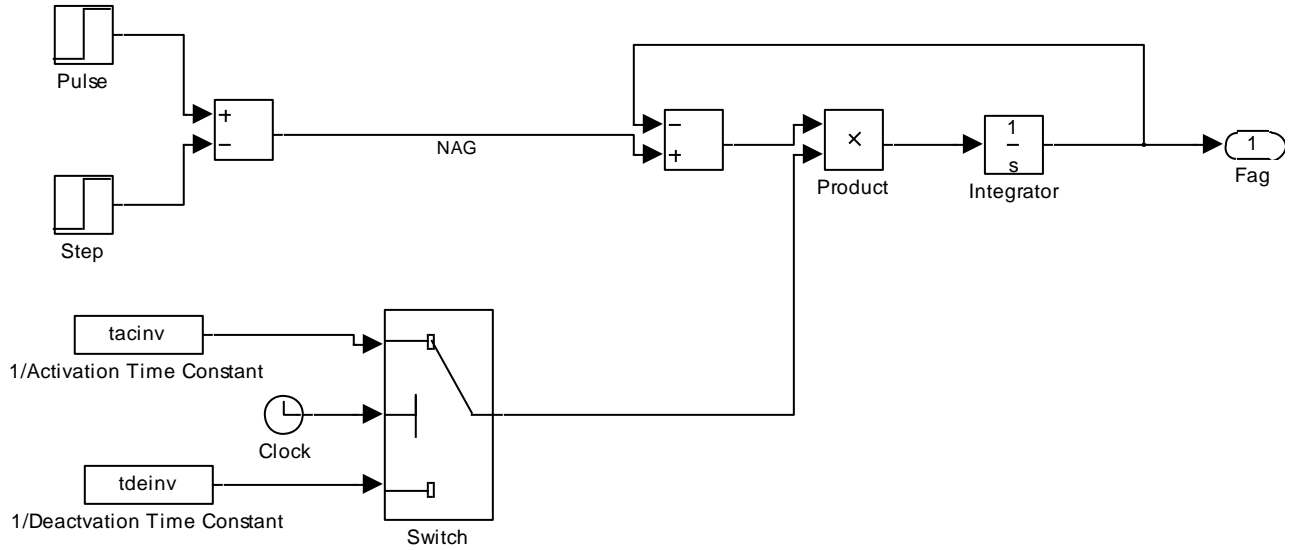
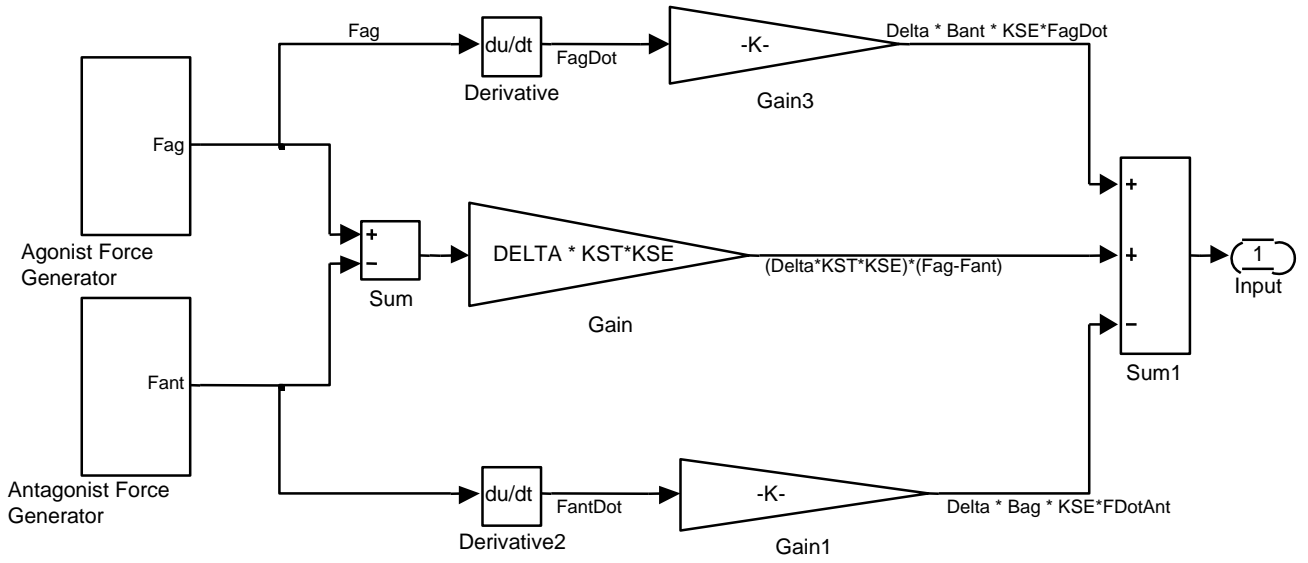
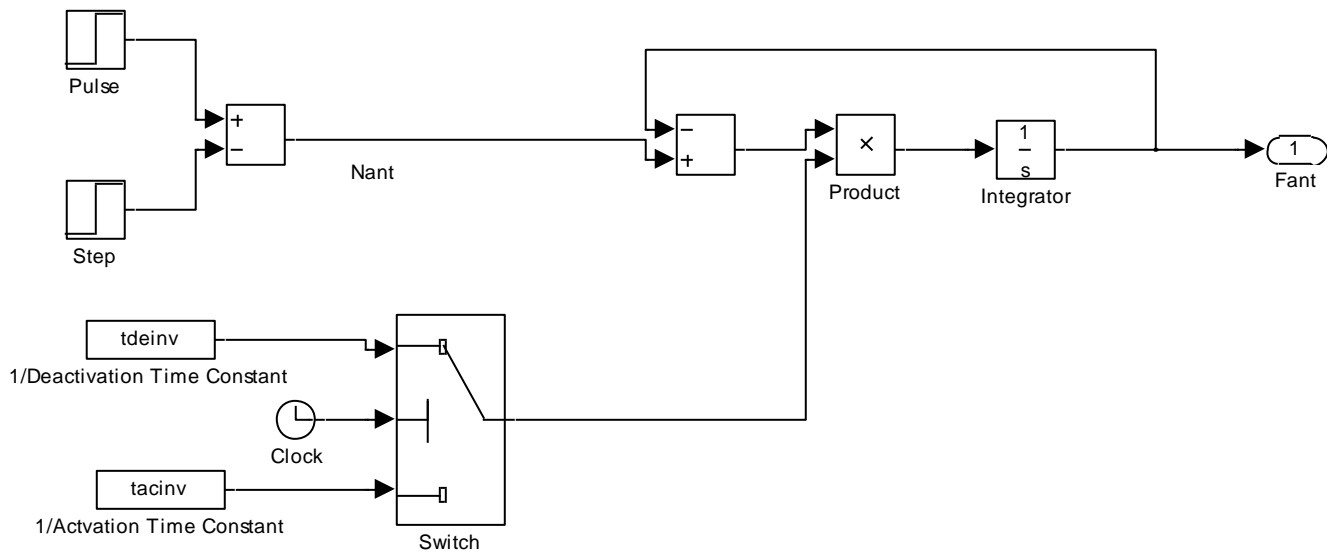
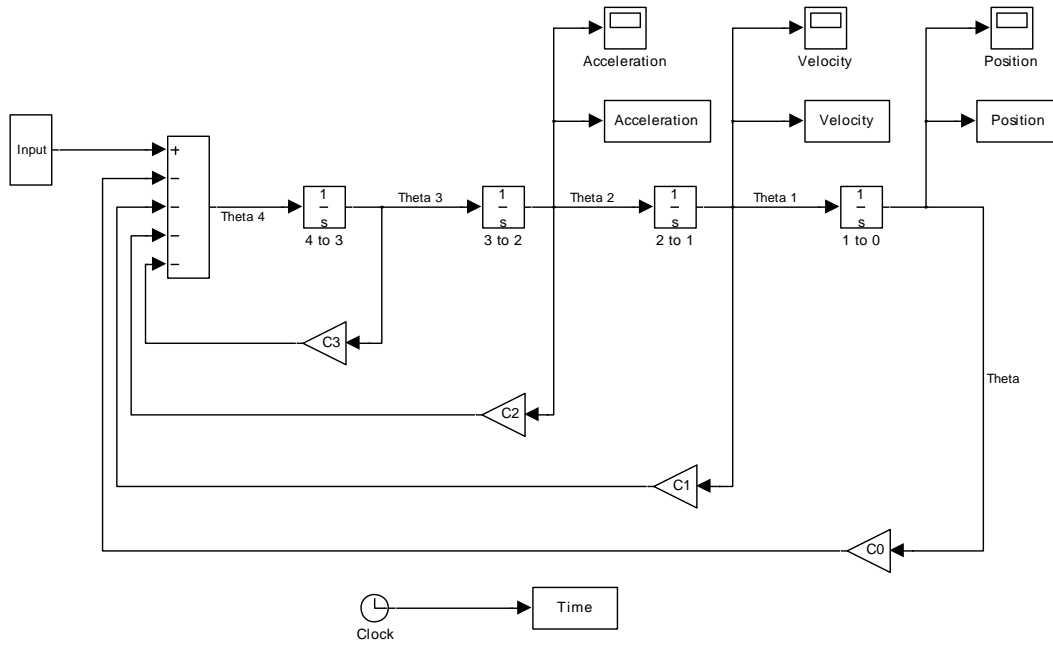


1.





M-File with parameter values:

```

Fp=1.3
t1=.031
theta=20
theta0=0
TDE=.0054
TAC=.009
tdeinv=1/TDE
tacin=1/TAC

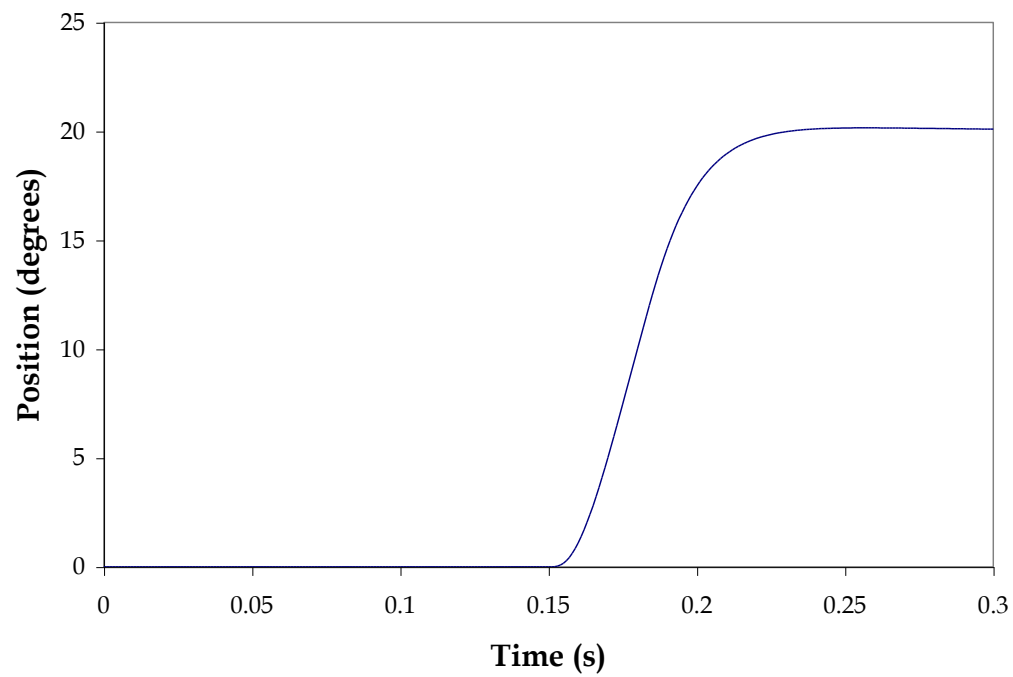
```

```

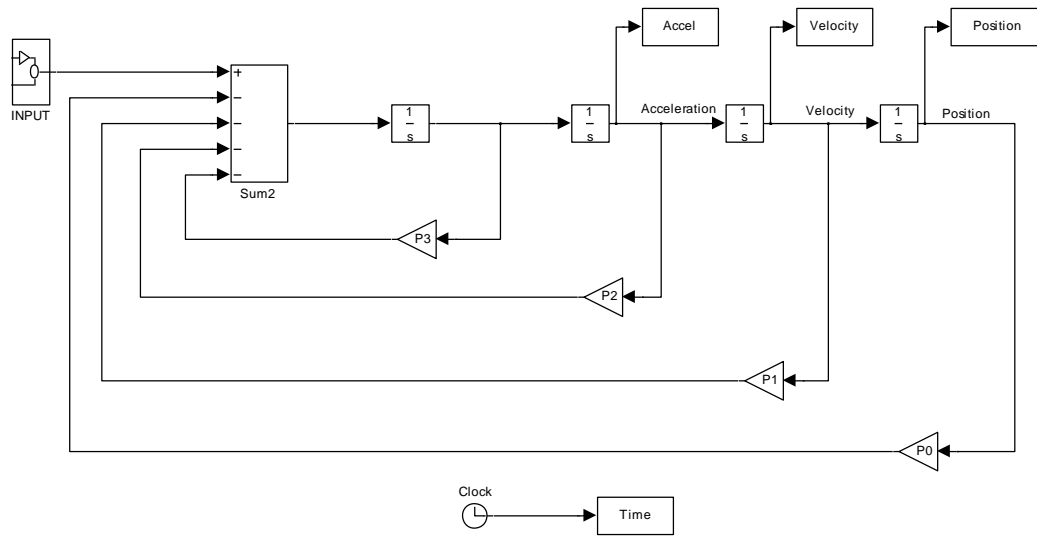
KSE=125
KLT=32
K=66.4
B=3.1
J=2.2 * 10^-3
BAG=3.4
BANT=1.2
DELTA=5.80261*10^5
KST=KLT+KSE
C0= ((K*KST^2)+(2*KSE*KST*KLT)) / (J*BANT*BAG)
C1= ((B*KST^2)+(BAG+BANT) * ((K*KST)+(2*KSE*KST)-KSE^2)) / (J*BANT*BAG)
C2= ((J*KST^2)+((B*KST)*(BAG+BANT)) + ((BANT*BAG)*(K+(2*KSE)))) / (J*BANT
*BAG)
C3= (((J*KST)*(BAG+BANT)) + (B*BANT*BAG)) / (J*BANT*BAG)
if theta0 < 14.23
    Fag0=0.14+0.0185*theta0
else
    Fag0=0.0283*theta0
end
if theta0 < 14.23
    Fant0=0.14-0.0098*theta0
else
    Fant0=0
end

if theta < 14.23
    Fagss=0.14+0.0185*theta
else
    Fagss=0.0283*theta
end
if theta < 14.23
    Fantss=0.14-0.0098*theta
else
    Fantss=0
end
latent=.15
sstart=latent+t1
agstep=Fp-Fagss

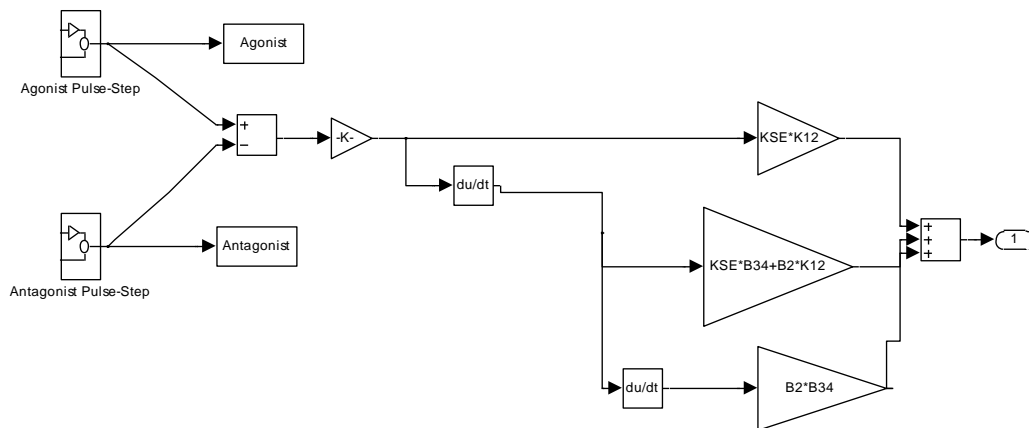
```

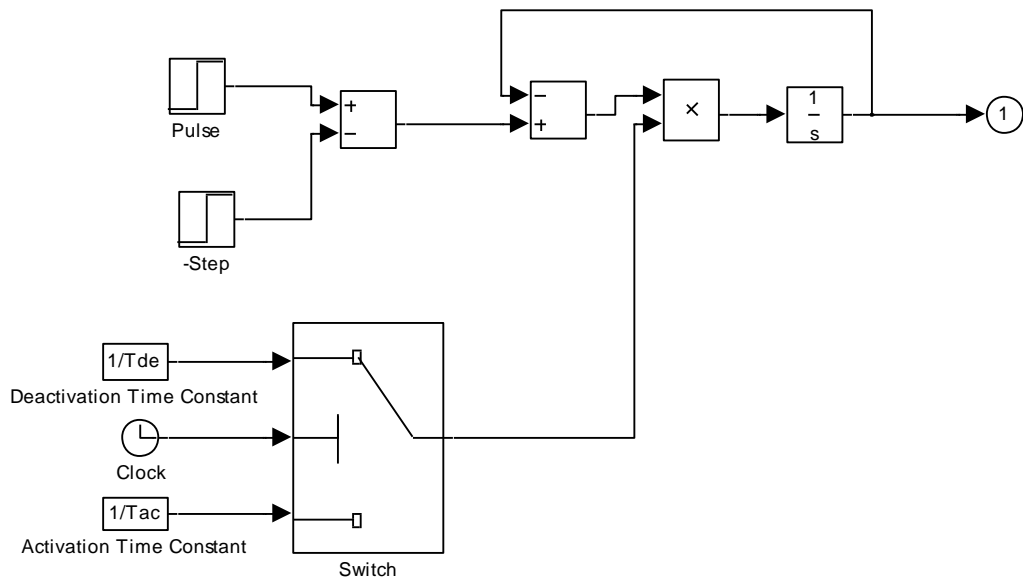
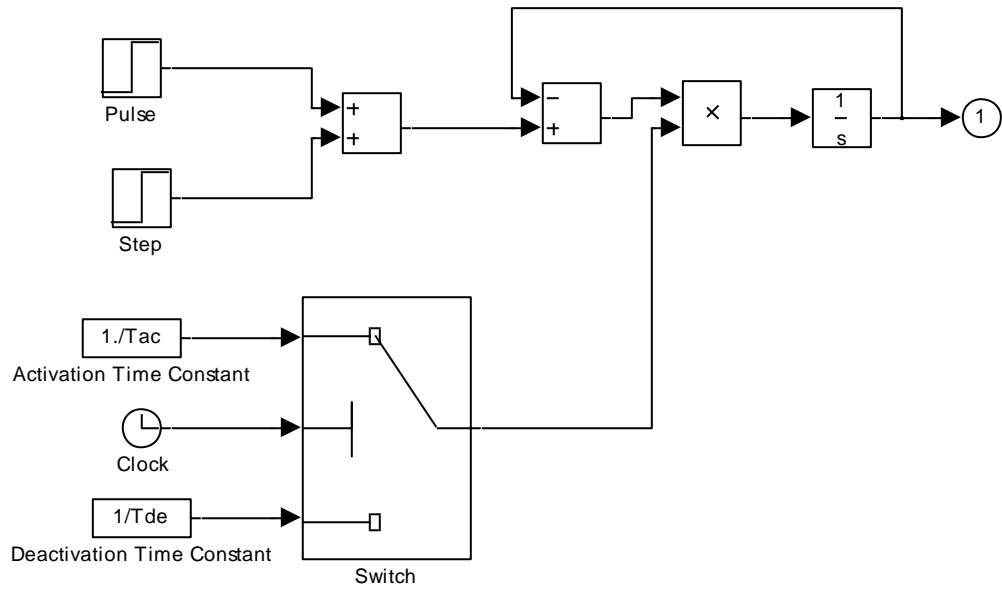


2.



After Running Simulation, Combine output in matlab Output=[Time Position Velocity Accel]





M-File with parameter values:

```
J=0.0022;  
B1=2.0;  
B2=0.5;  
B3=0.53804;  
B4=41.54;  
K1=26.9;  
K2=41.54;  
KLT=60.7;  
KSE=125;  
B12=B1+B2;  
B34=B3+B4;  
K12=K1+K2;  
KST=KLT+KSE;  
C4=J*B12*B34;  
C3=B3*B4*B12+2*B1*B2*B34+J*B34*KST+J*B12*K12;  
C2=2*B1*B34*KSE+J*KST*K12+B3*B34*KST+B3*B12*K12+K1*B12*B34-  
B3*B3*KST-2*K1*B3*B12+2*B2*KLT*B34+2*B1*K12*B2;  
C1=2*KLT*B34*KSE+2*B1*K12*KSE+B3*KST*K2+K1*B34*KST+K1*B12*K12-  
KST*K1*B3-K1*K1*B12+2*B2*KLT*K12;  
C0=2*KLT*KSE*K12+K1*KST*K2;  
P3=C3/C4;  
P2=C2/C4;  
P1=C1/C4;  
P0=C0/C4;  
DELTA=C0/(0.03*KSE*K12*C4);  
F0=0.4;  
theta=20.4  
Tac=0.018;  
Tde=0.018;  
DELAY=.15;  
Fmax=1.3;  
Fagss=F0+0.0175*theta;  
Fantss=F0-0.0125*theta;  
dur=0.0223
```

