# Code

clc

clear all

close all

syms X s

diff\_X=s\*X;

second\_diff\_X=diff\_X\*s;

m=20;

c=6;

tf\_=1/(m\*s^2+ c\*s)

F=50;

X(s)=(F)\*tf\_;

part\_a=ilaplace(X(s))

figure (1)

fplot(part\_a)

xlabel('time')

ylabel('Amplitude')

title('Part A')

F=2/s;

X(s)=(F)\*tf\_;

part\_b=ilaplace(X(s))

figure (2)

fplot(part\_b)

xlabel('time')

ylabel('Amplitude')

title('Part B')

F=2.5;

X(s)=(F)\*tf\_;

part\_c=ilaplace(X(s))

t=[0:0.1:20];

part\_c=5/12 - (5\*exp(-(3\*t)/10))/12;

figure (3)

plot(t,part\_c)

xlabel('time')

ylabel('Amplitude')

title('Part C')

# Output







