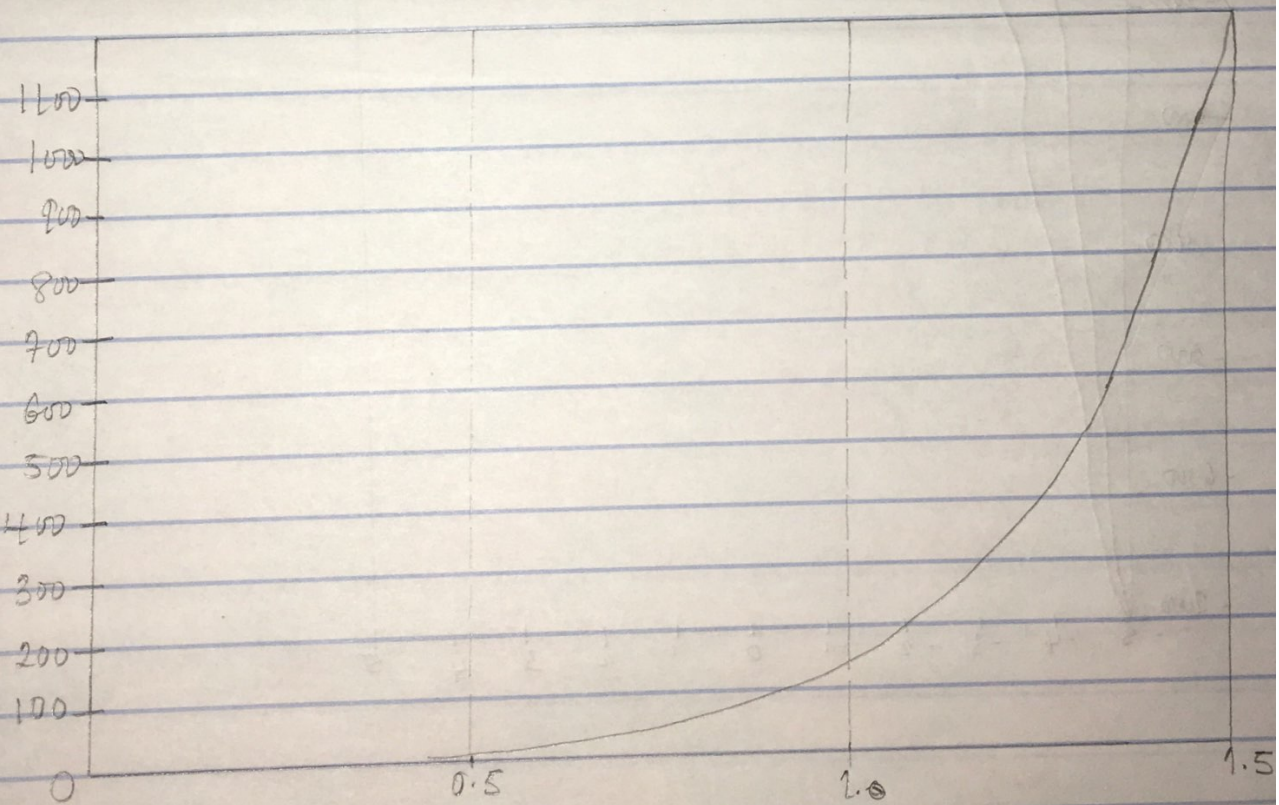
Precious Nsa
17/ENG08/002
Biomedical Engineering
ENG 381 Assignment

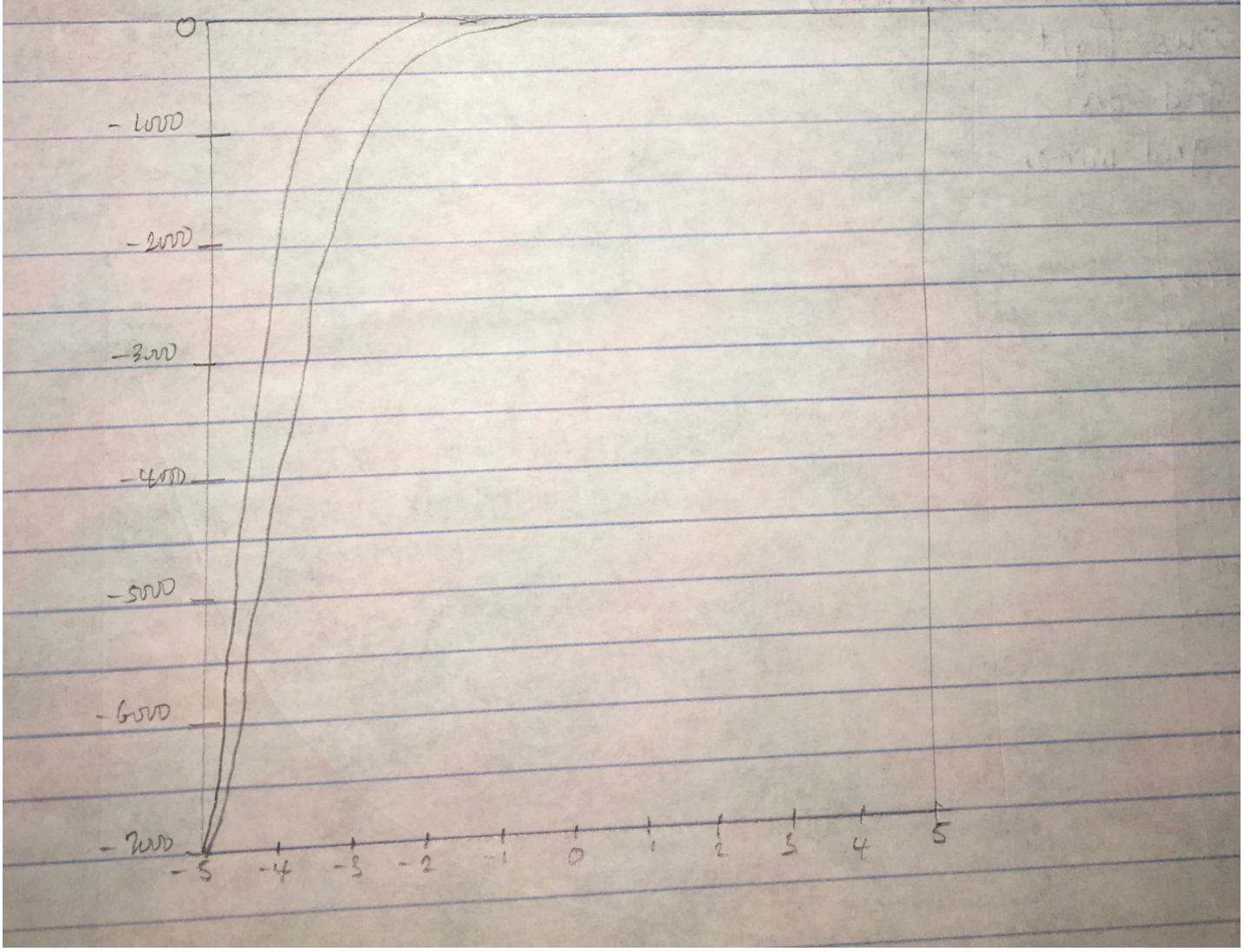
(a) Commandwindow

```
clc
clear
syms n(t)
mine = diff(n,t,2)-diff(n,t)-ln*n==144*t^3+12.5
dmine = diff(n,t)
precious =[n(0)==5; dmine(0)==-0.5]
Solution = dsolve(mine, precious)
  X = [0:0.1:1.5]
minen = subs(Solution, X)
 plot(X, mine solution)
   axis tight
   grid on
   grid minor
```



b.) (i) Command window

```
clc
clear
syms y(t) x(t)
nat1 = diff(y,t) - 2*x == exp(-2*t)
nat2 = diff(x,t) + y == exp(-t)
Natf = [nat1, nat2]
Cond = [y(0) == 0, x(0) == 0]
[finy finx] = dsolve(Natf, Cond)
fplot(finx)
hold on
fplot(finy)
grid on
grid minor
```



(c) Command window

```
clc
clear
syms t k a w
ft == k*exp(-a*t)*sin(5*w*t)*cos(3*w*t)
fs) == laplace ft)
```