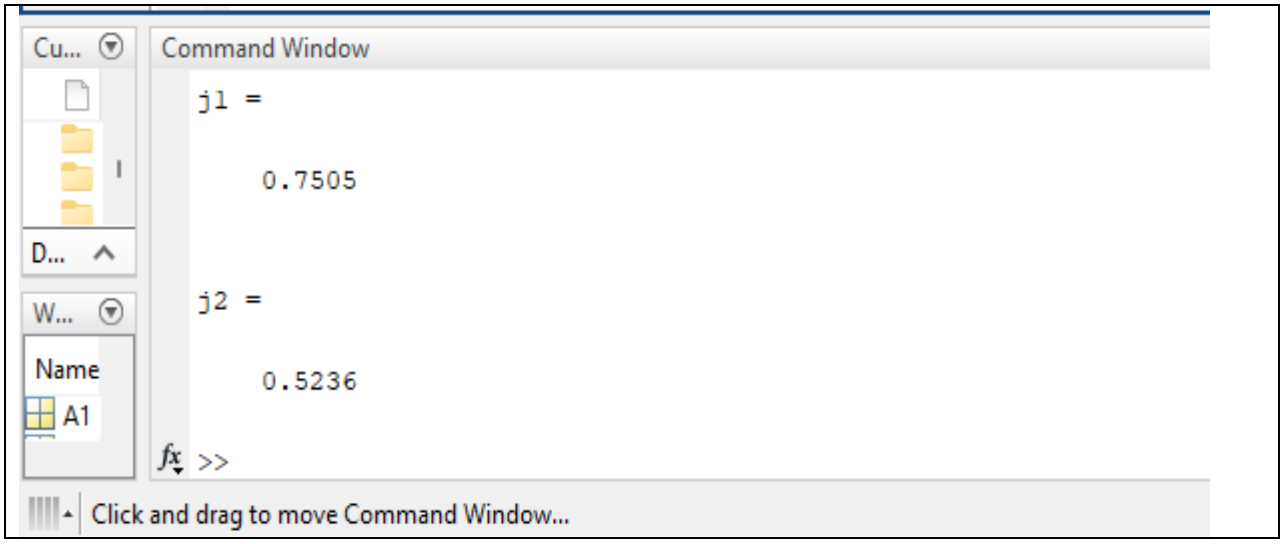
Lab Report-01
Name: Md. Abdul Muneem Adnan
Course: DATA COMMUNICATION [F]
ID: 20-44213-3

1(a)

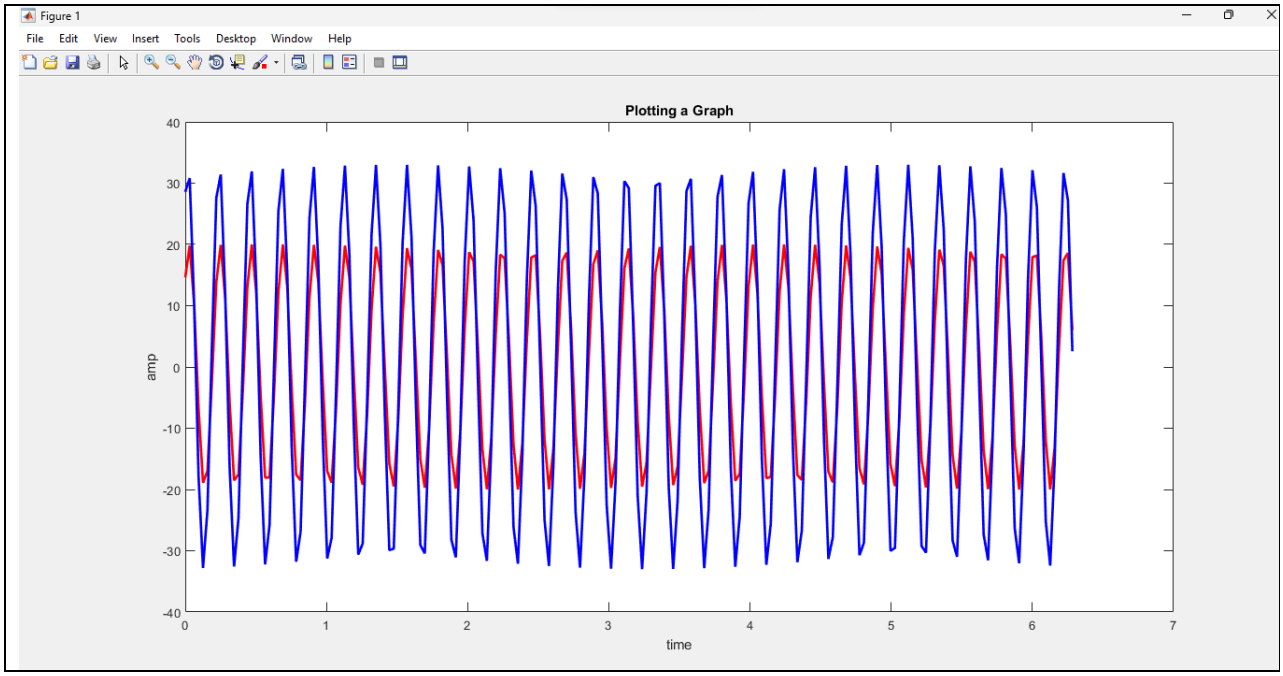
```
A=2; B=0; C=4; D=4; E=2; F=1;
G=3; H=3;A1=20; A2=33;
j1=43; j2=30;
j1=43*(pi/180)j2=30*(pi/180)
```



1(b)

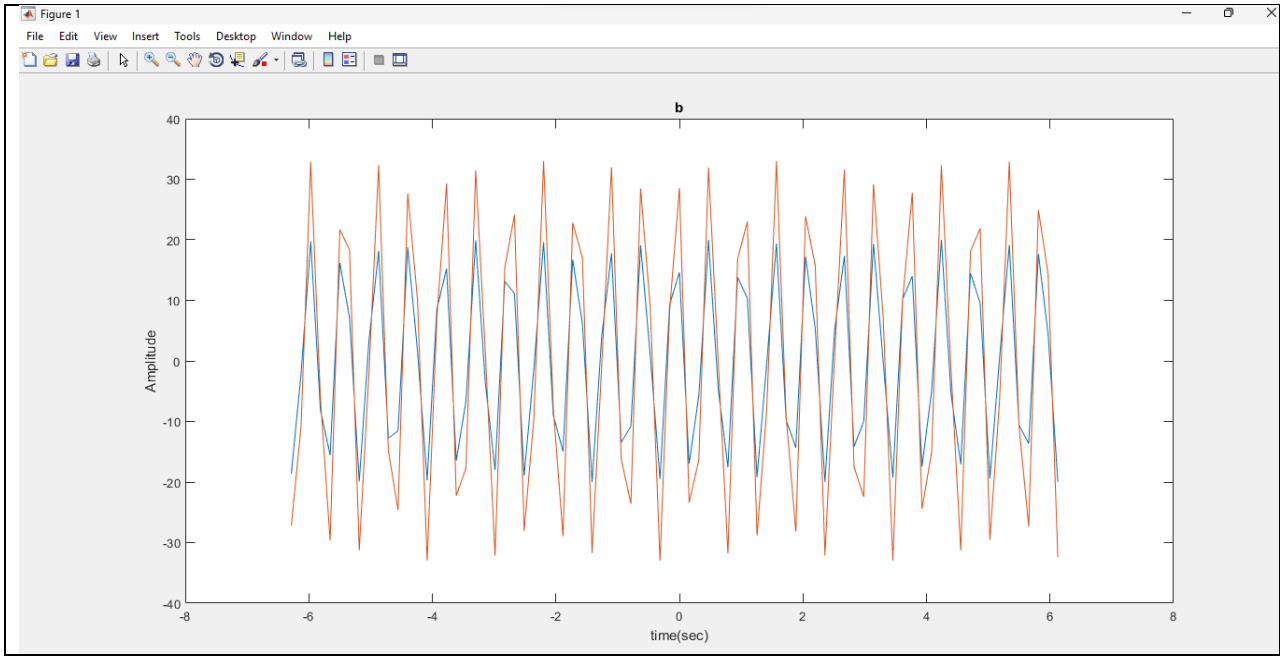
A1=2

```
0;
A2=3
3;
j1=43*(pi/180);
j2=30*(pi/180);
t=0:pi/100:2*pi;
x1=A1*cos((2*pi*4420*t)+j1);
plot(t,x1,'r','linewidth',2); hold
on;
x2=A2*cos((2*pi*4420*t)+j2);
plot(t,x2,'b','linewidth',2); hold
on;
title('Plotting a Graph');
xlabel('time')
ylabel('amp')
```



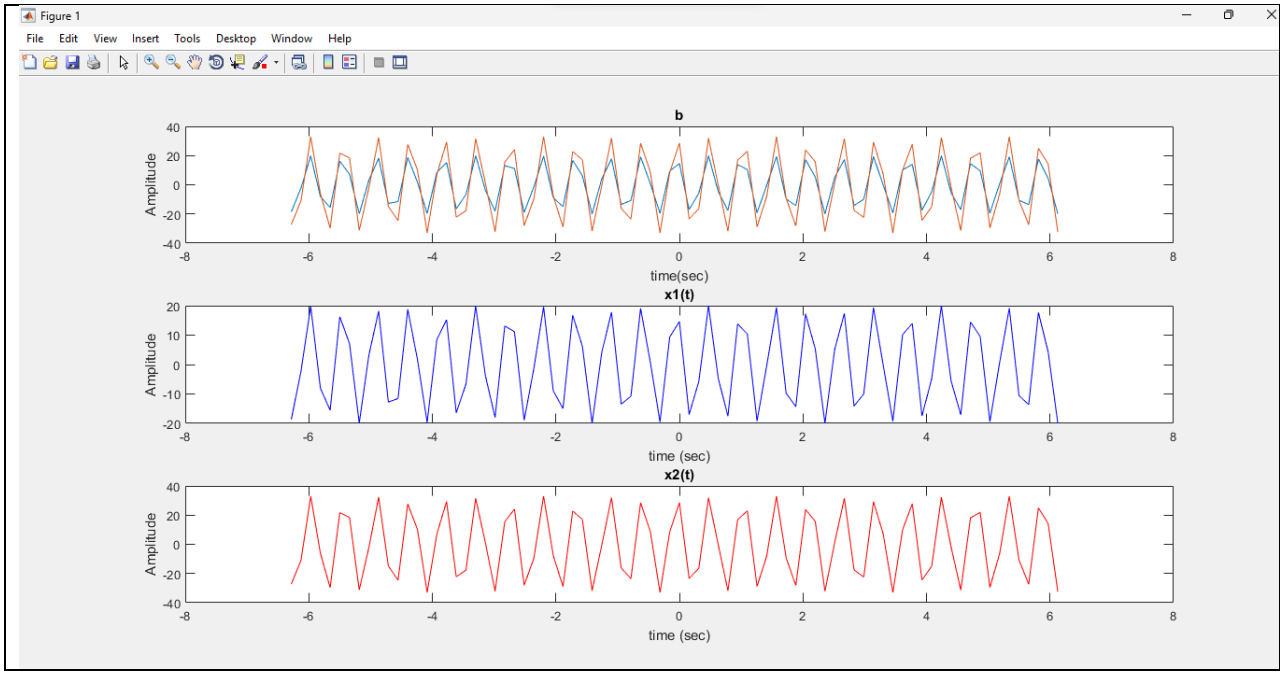
1(c)

```
clc;
close all;
clear all;
A1=20;
A2=33;
j1=43*(pi/180);
j2=30*(pi/180);
t= -2*pi:pi/20:2*pi-pi/20;
x1_t=A1*cos((2*pi*4420*t)+j1);
x2_t=A2*cos((2*pi*4420*t)+j2);
plot(t,x1_t,t,x2_t)
title('b')
xlabel('time(sec)')
ylabel('Amplitude')
```



1(d)

```
clc;
close all;
clear all;
A1=20;
A2=33;
j1=43*(pi/180);
j2=30*(pi/180);
t= -2*pi:pi/20:2*pi-pi/20;
x1_t=A1*cos((2*pi*4420*t)+j1);
x2_t=A2*cos((2*pi*4420*t)+j2);
subplot(3,1,1)
plot(t,x1_t,t,x2_t)
title('b')
xlabel('time(sec)')
ylabel('Amplitude')
subplot(3,1,2)
plot(t,x1_t,'b')
xlabel('time (sec)')
ylabel('Amplitude')
title('x1(t)')
subplot(3,1,3)
plot(t,x2_t,'r')
xlabel('time (sec)')
ylabel('Amplitude')
title('x2(t)')
```



1(e)

```
clc;
close all;
clear all;
A1=20;
A2=33;
j1=43*(pi/180);
j2=30*(pi/180);
t= -2*pi:pi/40:2*pi-pi/40;
x1_t=A1*cos((2*pi*4420*t)+j1);
x2_t=A2*cos((2*pi*4420*t)+j2);
x3_t=x1_t+x2_t;
subplot(3,1,1)
plot(t,x1_t,'b')
xlabel('time (sec)')
ylabel('Amplitude')
title('x1(t)')
subplot(3,1,2)
title('x1(t)')
subplot(3,1,2)
plot(t,x2_t,'r')
xlabel('time (sec)')
ylabel('Amplitude')
title('x2(t)')
subplot(3,1,3)
plot(t,x3_t,'g')
ylabel('Amplitude')
xlabel('Time (sec)')
ylabel('Amplitude')
title('x3(t)=x1(t)+x2(t)')
```

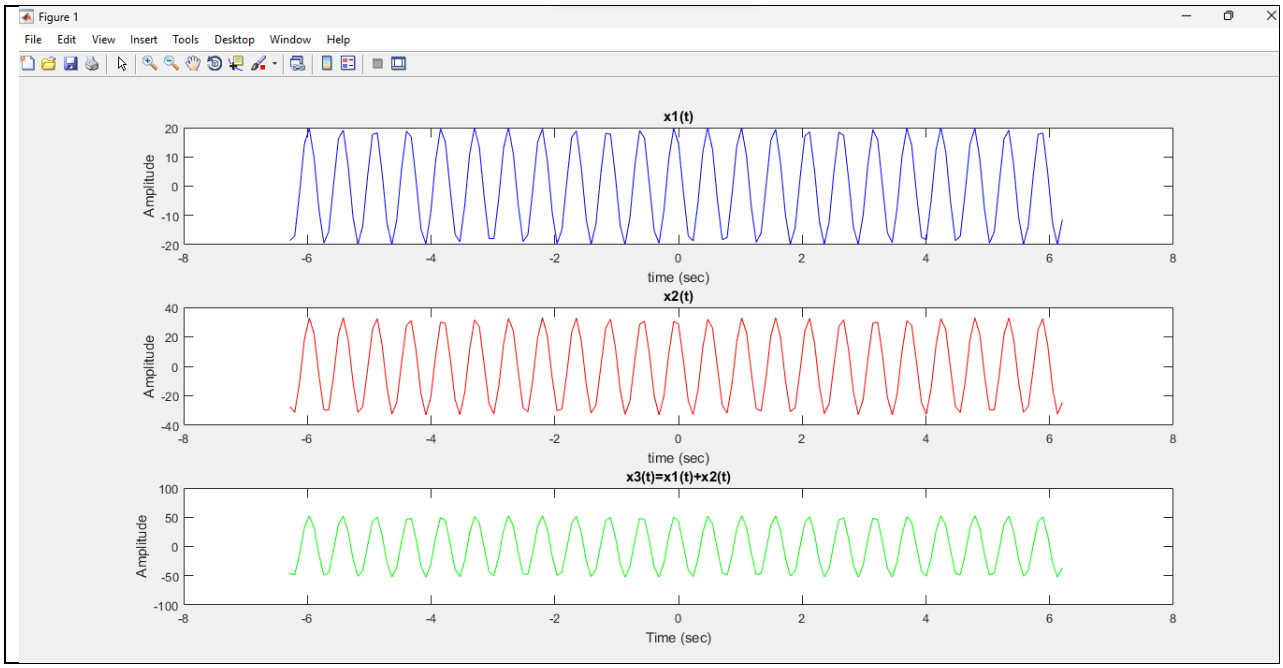


Figure 1
File Edit View Insert Tools Desktop Window Help
x1(t)
Amplitude
time (sec)
x2(t)
Amplitude
time (sec)
x3(t)=x1(t)+x2(t)
Amplitude
Time (sec)