5.

a) plot of



c)



**Matlab Code:**

%Question 5.a)

>> t=0:.001:.2;

>> x=sin(2\*pi\*10\*t);

>> plot(t,x)

>> xlabel('t')

>> ylabel('x(t)')

>> title('Plot of x(t)')

%Question 5.c)

>> title('Plot of x(t) and Aliases at Different F')

>> hold on;

>> n=0:1:6;

>> y1=sin(-2\*pi\*30/40\*n);

>> y2=sin(2\*pi\*50/40\*n);

>> y3=sin(-2\*pi\*70/40\*n);

>> plot(n/40, y1, '\*')

>> plot(n/40, y2, 'o')

>> plot(n/40, y3, '+')

>> legend('x(t)','-30','50','-70')