**Experiment-05**

**FREQUENCY MODULATION AND DEMODULATION**

fs=10000;

ac=1;

am=1;

fm=35;

fc=500;

b=10;

t=(0:0.1\*fs)/fs;

wc=2\*pi\*fc;

wm=2\*pi\*fm;

mt=am\*cos(wm\*t);

subplot(4,1,1);

plot(t,mt);

title('modulating signal');

ct=ac\*cos(wc\*t);

subplot(4,1,2);

plot(t,ct);

title('carrier signal');

st=ac\*cos((wc\*t)+b\*sin(wm\*t));

subplot(4,1,3);

plot(t,st);

title('modulated signal');

d=demod(st,fc,fs,'fm');

subplot(4,1,4);

plot(t,d);

title('demodulated signal');

