





```

function [beta]=spectrum(fm);
fs=1000;%sampling frequency;
delt=1/fs;
t=0:delt:1-delt;%time vector;
npts=length(t);
fn=(0:npts)-(fs/2);%frequency vector for plot;
fd=10;
beta=fd/fm; %assume Am=1;
m=beta*cos(2*pi*fm*t);%phase deviation;
xc=sin(2*pi*100*t+m);%modulated carrier;
asxc=(1/npts)*abs(fft(xc));
evenf=[asxc((npts/2):npts) asxc(1:npts/2)];
stem(fn,evenf,');
xlabel('Frequency-Hz')
ylabel('Amplitude');

```