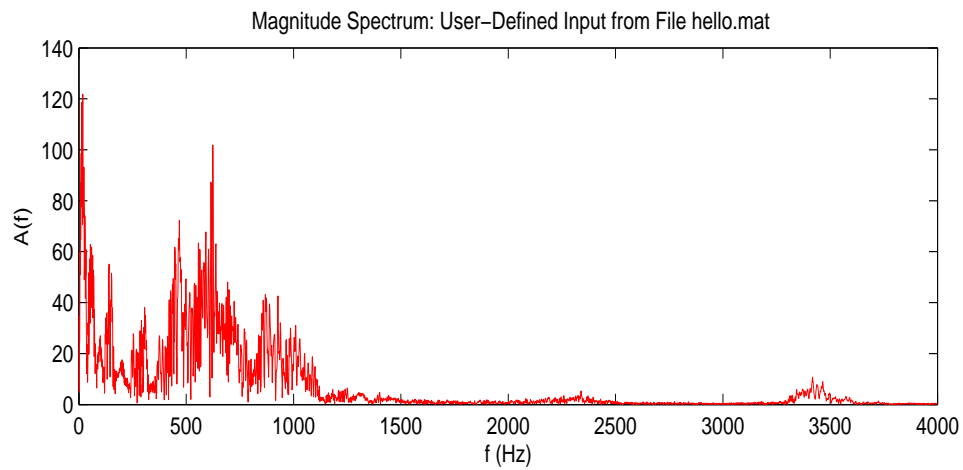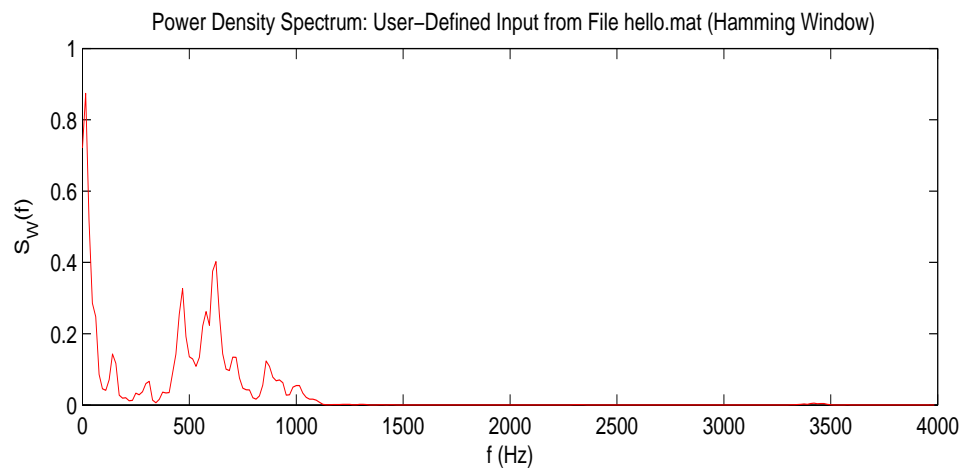3.21 Using the GUI module *g_spectra* record the word HELLO. Play it back to make sure it is recorded properly. Save it in a MAT-file called *hello.mat*. Then reload it as a user-defined input. Plot the following spectral characteristics.

(a) Magnitude spectrum

(b) Power density spectrum (Hamming window)

(c) Spectrogram

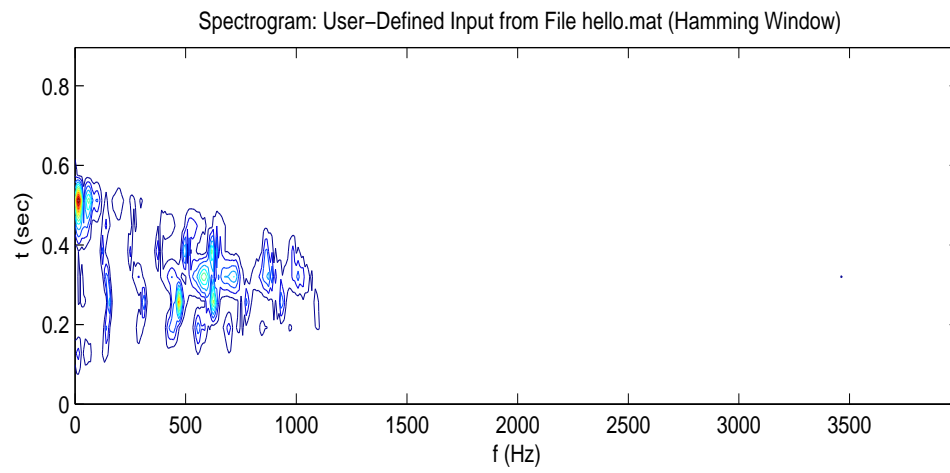**Solution**

(a)

(b)

Spectrogram: User–Defined Input from File hello.mat (Hamming Window)

(c)