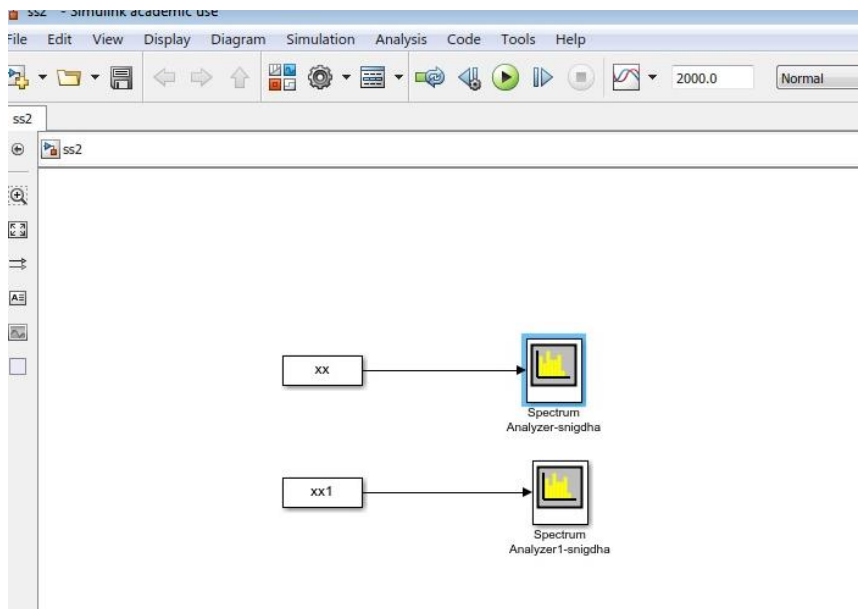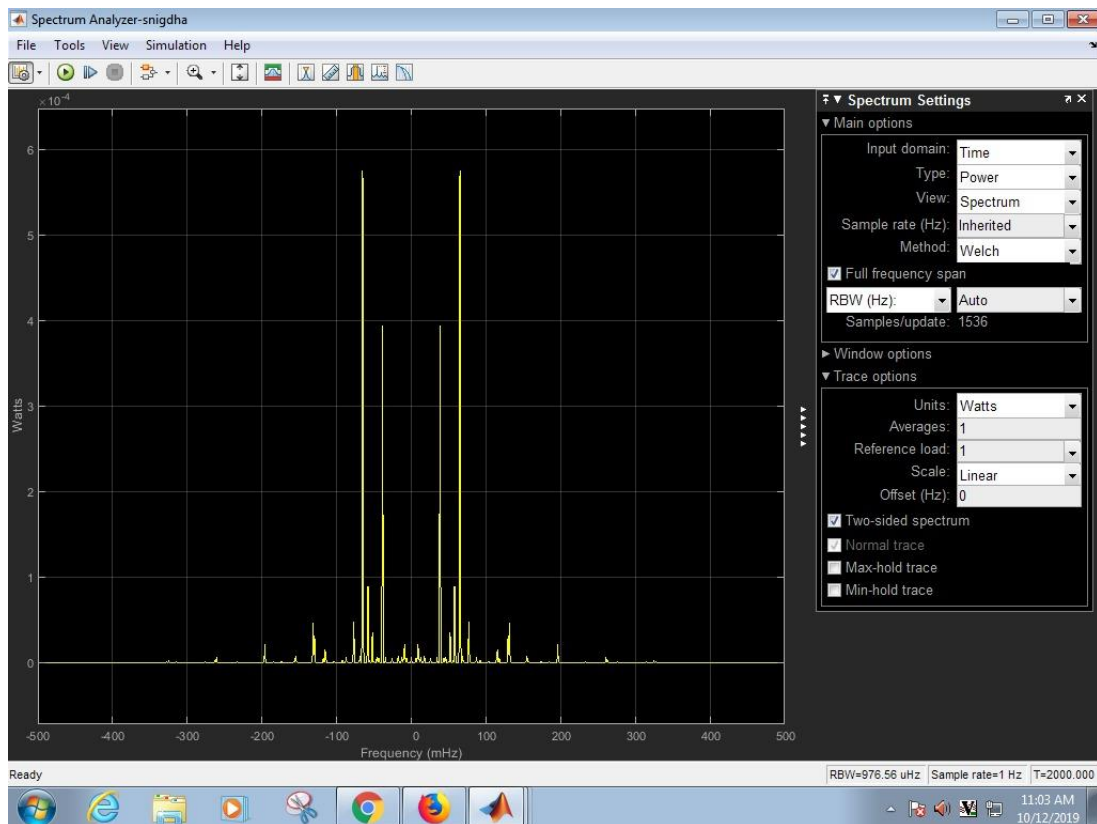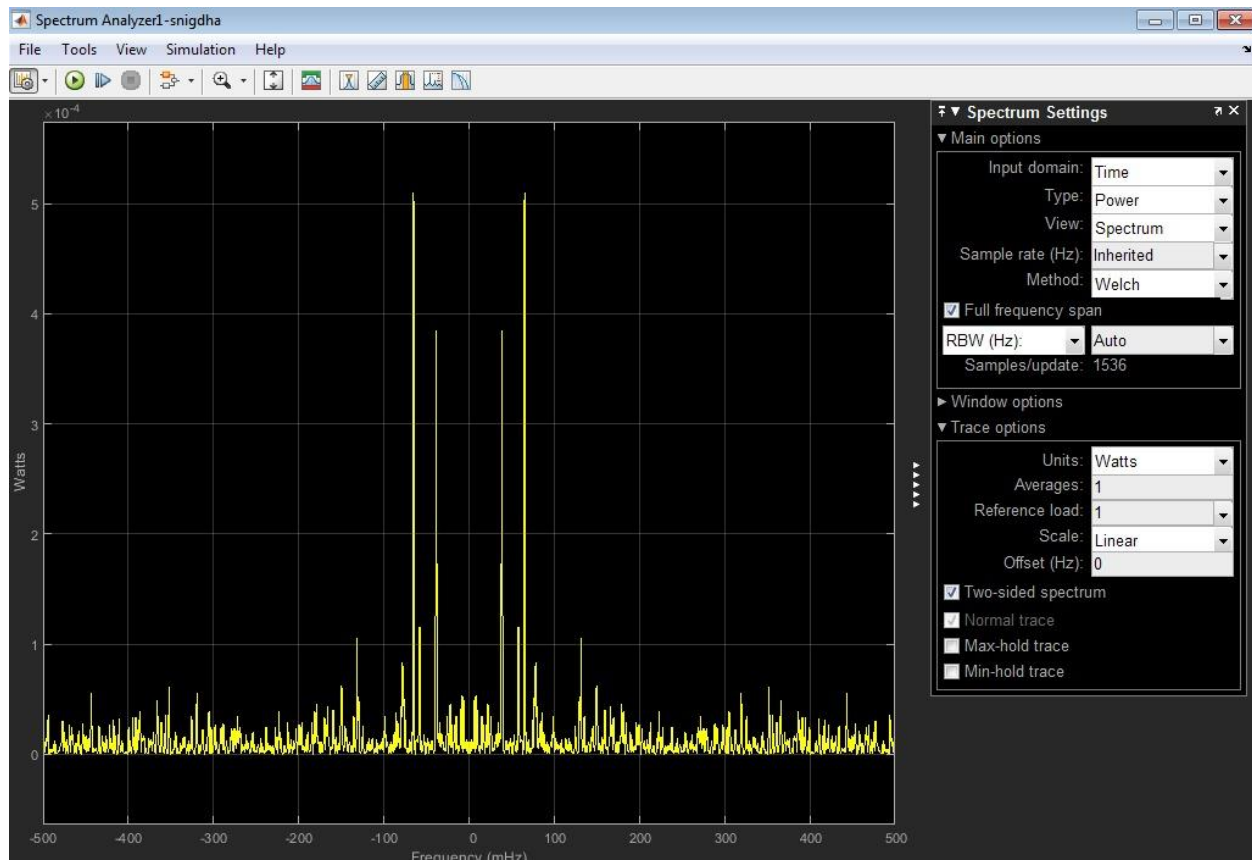Q3&4

Signal:

Signal with noise:

Q5.