TUTORIAL

NON STATIONARY SIGNALS AND TFD

Q1

(a) Write the expression of a signal composed of three tones [300, 200, 100] Hz, each of them of the duration of 1 second and starting one after the other. The signal is sampled at Nyquist frequency.

(b) Write the expression of the signal when the three tones are present for all the 3 seconds.

(c) Which of the two signals (a) or (b) is non-stationary?

Q2

(a) Sketch the time frequency distribution of the signals in Q1

(b) What is a good value for the time window to be used in order to have enough frequency resolution to discriminate the three components of the two signals in Q1?