Out: 6/9/2018
Due : 13/9/2018

only first 2 questions need to be submitted.

AV314 - Assignment 6

1) Using Carson's rule obtain an approximation for the FM signals which are obtained by frequency modulating the following baseband signals
   a) $5\cos(2\pi \cdot 100t) + 10\sin(2\pi 150t)$.
   b) $\text{sinc}(200t)$.
   Assume that the FM sensitivity $k_f = 10$ (units of k_f is usually V/Hz).

2) Suppose $m(t)$ is a bandlimited periodic baseband signal with fundamental period T_0. Can you extend the Bessel function based derivation of the FM spectrum from the single tone case (which was done in class) to this case? Write down the derivation in detail.

Questions for the review class (from Upamanyu Madhow, Chap 3).
Please review these questions before 10th of September.

Example 3.2.4, Example 3.3.1.
Problems 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 3.8, 3.13
3.14, 3.16, 3.19