

Feedback for EEE6440 Session: 2012-2013

Feedback: Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

General Comments:

Compared to last year, this year's performance has improved and overall it is satisfactory result. Most students failed to read the questions in PART A carefully.

Question 1:

This question was attempted well. 1.b the question was on the complexity of 5-point MAF. But most students derived the expression for N-point MAF as in the lecture notes and in the previous year's paper. This was a good example of not reading and understanding the question well. Some students confused the number of multiplications and additions and did not define what L was. In 1.c, you are expected to "sketch" and "compare" "time" and "frequency" domain performance. The answer requires addressing all these 4 things. But unfortunately many students missed these in their answers. Also they failed to sketch the new step and frequency responses just by extending the single-stage filter.

Question 2:

This question was answered well. But 2.e was not answered well. Most students failed to apply the analogy of FFT-based noise removal into wavelet-based noise removal. For those who attempted, forgot to do apply the inverse wavelet transform at the end.

Question 3:

In Part A, this is the most satisfactorily answered question. 3.b was answered well. But for 3.a, it is evident that most students failed to understand the question. The explanation required in 3.c was mostly incomplete for most answers. Students are recommended to refer to the Exam solutions.

Question 4:

The main problem is 4.b. Only a few students gave the correct derivation from "independent" to "uncorrelated". The key to solve this problem is to know the mathematical expressions for both "independent" and "uncorrelated". After that it will not be difficult to relate them mathematically.

Question 5:

The main problem is 5.a. Most of the students got it wrong. The key is to know the inverse Fourier Transform and get the expression for the power of the signal in terms of the power spectral density function.

Question 6:

The main problem is 6.b. Most of the students know the basic process to derive the Wiener solution. However, almost all of them made all kinds of mistakes at some details of the derivation.