Examination Feedback for EEE6440 – Advanced Signal Processing
Autumn Semester 2013-14

Feedback for EEE6440 Session: 2013-2014

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:

The overall performance is good.

Question 1:

 This question was a popular choice. But the performance was average. Q1a.-1.c were well attempted. For Q1.d, most students tried to compute the frequency response and the step responses when you were expected to derive it from the single stage filter. The same mistake was seen in Q1.f. In Q1.e, the minus sign was wrongly placed in the block diagram.

Question 2:

 The Q2.b was not answered well. To derive the inverse transform, you cannot just take the transpose of the transform matrix. Before that you have to verify that the matrix is orthonormal. Only a few answers showed the checking of othogonality of the matrix. In Q2.d, most students forgot to include the inverse transform step at the end. Q2.e was the most poorly answered question, as the students did not show an understanding of separable application of the 1D transform.

Question 3:

 This question was answered well. The explanation required for Q2.a was mostly incomplete. Q2.b and Q2.c were answered well. In Q2.b, the main difficulty was in finding the transition bandwidth for the first antialiasing filter.

Question 4:

The main problem is 4.c. Most of the students could not give the full answer. It is about the application of adaptive filtering theory in three different ways: system identification, inverse filtering and linear prediction.

Question 5:

 The main problem is 5.a. The proof can be done in either time domain (convolution) or z-transform domain. The z-transform domain approach is relatively easier.

Question 6:

 The main problem is 6.b. The introduction of the forgetting factor is to deal with non-stationary signals and only a few students gave the correct answer.