Examination Feedback for EEE6400-Communication Principles
Autumn Semester 2013-14

Feedback for EEE6400 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 satisfactory. Of 93 students, 76 chose the first question, 76 chose the second question, 52 chose the third one and 75 chose the fourth one.

Question 1:

The main problem is b. and c. For b, the key is to notice that both the quantization noise and the signal have a uniform distribution and therefore their power can be calculated in the same way, i.e. squared peak to peak value divided by 12. For c, the key is to understand that the condition is given by C/B->0, not B->infinity.

Question 2:

The main problem is a (ii). We need to use extension code and construct a new set of symbols. The probability for each new symbol can be obtained by the results from (i). Then Huffman coding can be applied.

Question 3:

For a, we need to give details for each synchronization level. For b, most of students can give the correct results. For c, when calculating the overall probability of error, some students forgot to include the probability of each symbol (i.e. 1/3) in the final equation.

Question 4:

All the sub-questions are relatively easy. However, it is also easy to make mistakes for all kinds of details, such as how to calculate the average delay in the TDMA system (a), where to put the parity symbol, whether it is odd-parity or even-parity (b), where is the output for the PN sequence generation circuit (c), which one is the public key and how to calculate the modulo operation (d).