Examination Feedback for EEE6222 – Principles of Communication
Spring Semester 2015-16

Feedback for EEE6222 Session: 2015-2016

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:

Overall a very good attempt. Of 67 students, 53 attempted the first question, 39 the second question, 44 the third one, and 27 attempted the fourth one. Indeed the fourth question is the most difficult one.

Question 1:

For a, the main problem is finding the probabilities for the four quantisation outputs and many made mistakes in this step.
For b, the main problem is understanding of the Shannon limit, which is given when C/B goes to zero, not B goes to infinity.
For c, this is one of the most difficult questions and most students failed to give the correct derivation.

Question 2:

For a, this is one of the most difficult questions and most have failed to give the correct result.

For b and c, an overall good attempt.

Question 3:

For a, a good attempt. Only a few struggled on this.
For b, a good attempt, but many made various minor mistakes in the mathematical explanation.
For c, the main problem is (iii). It is not difficult, but complicated and easy to make mistakes.

Question 4:

For a, an almost perfect attempt.
For b, only a few gave the correct proof, as this is the most difficult question, requiring thorough understanding of several related mathematical representations.

Question 5:

Part a: No real problems.
Part b: Some students cannot find the decision thresholds correctly. Some students forgot to include the a priori probability in the calculation of error probability.

Question 6:

Part a: Some students don't understand the concept of run sequence, or didn't label the modulo-2 adder in the PN generator circuit.
Part b: No real problems.
Part c: Some students fail to illustrate a correlation receiver.