

Examination Feedback for EEE224/227 – Communications Electronics
Spring Semester 2014-15

Feedback for EEE224/227 Session: 2014-2015

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:

Very poor attempts at Question 1. Generally satisfactory attempts at Questions 2-6.

Question 1:

Very poor attempts at this question.

Part a was generally answered well

Part b: Students could not break this into two convolutions or if they did could not carry out the convolution, often purely integrating the functions or multiplying them.

Part c: Reasonable attempts. The main problem was the vast majority of students did not plot a graph of the frequency spectrum and lost out on marks because of this

Question 2:

Generally answered well.

Part a: Most could do this

Part b: Mistakes related to using \log_{10} instead of \log_2 or converting dB to linear incorrectly

Part c: The first element was done well, some student struggled to convert the signal to PCM

Question 3:

Generally answered well

Part a: Some students only included a single stage receiver

Part b: Parts 1-4 generally answered correctly, part 5 was not attempted by many or incorrect

Part c: Some mistakes in the IFRR equation

Part d: Generally correct

Question 4:

Generally satisfactory attempts at Q4.

Part a: Many students failed to find the standard form of the transfer function.

Part b: Only a few students managed to go through the numerical calculations to find the values of three unknown circuit components.

Question 5:

Generally answered well.

Part a: Most students can use partial fraction expansion to find the step response. Common mistakes occur in numerical calculations.

Part b.i): Many students failed to find the standard form of the transfer function, and as a result made a mistake with the type of circuit response.

Part b.ii): Common mistakes occurred in numerical calculations.

Question 6:

Generally answered well.

Part a: Common mistakes were due to misunderstanding of the question.

Part b: Many students failed to find the voltage of the first forward wave, which would affect the subsequent calculations.

Part c: Common mistakes occurred in the analysis of the load current after $3\mu\text{s}$.