Examination Feedback for EEE116 – Multimedia Systems I
Autumn Semester 2006-07

Feedback for EEE116 Session:2006-2007

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:

In general, the paper was answered well. The most common mistake was "failing to read the question properly", and hence writing irrelevant details. Questions 1 and 3 were popular and well answered compared to questions 2 and 4.

Question 1:

This question was answered well. In 1.c students were asked to explain the functionality of the named fields. But most of the answers included a description about the field. In1.d most answers did not give the example from the "transport layer protocols" as required by the question. In 1.e the most common mistakes were not converting Bytes into bits or vice versa to compute the transmit time, where the data size was given in "bytes" and the channel bandwidth was given in "Kbps", i.e., "K bits per second" and not considering $K=2^{10}$.

Question 2:

In 2.b, the most of the answers did not state the Nyquist sampling limit. The answer should have included two points: The Nyquist limit specifies the minimum sampling rate and it is two times the highest frequency present in a signal. In 2.c most answers did not include the anti aliasing filter in the audio digitization system diagram. Some students did not read the question and went onto describe the image compression model. In 2.d. Most students were able to compute the code length N bits/sample, but forgot to use the number of different values $C=2^N$ to compute the quantization step size,

Question 3:

In 3.b the question was on "image" compression, but some answers included examples and applications from audio and video compression. In 3.c. some answers did not consider the pair of symbols with the lowest probabilities at a given pass for merging. Some answers considered reading the code from left to right than right to left. The most common mistake in 3.d was computing the coding efficiency when the compression ratio was asked. 3.e. The verification was very poorly demonstrated. The answers should have included the demonstration of the shorter codes not appearing as the prefix of the longer codes. Instead some answers just included the statement "prefix condition is satisfied" even when it was not the case, when the code in 3,c had been derived by reading from left to right.

Question 4:

In 4.a most students forgot the benefit of using the same devices to display/transmit both black and white and colour television (because Cb=Cr=0 for Black and white). In 4.b.iv, most answers just specified the chrominance sampling sampling format rather than explaining how the specified format reduces the data rate by 50%. For 4.b.v, students were required to recommend a video "standard" that can be used in DVB as the application in the question was on TV broadcasting. Only a few students demonstrated that they understood the question.