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Comments

Question 1 parts a-e
Answers here were generally reasonable, with the most common problems being with knowing that telephone quality speech is 8-bit samples at 8kHz, and with a confusion between double-buffering and other I/O systems with two buffers.

Question 1 parts f-j
These short questions are a straightforward test of your revision, though they are on points that were flagged during the lectures as being particularly important to someone who professes competence in mobile systems. There are no tricks or twists. If you fail to get full marks you have simply failed to revise the whole course or pick up the points that were emphasised as being vital. Overall, the average for Question 1 was pretty good, but it was not close to 100 % as we hoped.

Question 2
Less than half the class attempted this question and for those that did the average was probably low.
The calculations on 2(a) are based directly on slides in Lecture 6 and the Revisions Class. These must have passed many people by.
Part (c) asks for a block diagram and this makes the remaining part of the question pretty straightforward to answer as you just have to talk about the blocks and what they do. The question becomes self-organising. The block diagram should be well known (its in Lecture 3). Without a block diagram the question becomes harder to answer.

Question 3
Most people answered this question which is based on Lecture 5 and the Revision Class. The average was not too good largely because of a number of very low marks (close to zero) and the lower than expected responses to part (a). Disregarding the six lowest (very low) marks (out of 57) probably produces a reasonable average. Part (b) was generally well done. Parts (a) and (c) were well understood by most students. In Part (d), many people almost lost one precious mark because they could not define ‘channel capacity’. Actually, the part about “..with an arbitrarily low bit-error rate’ that most people missed, is often misunderstood and I will try to explain it better next year (many people were forgiven this omission because of rounding up half marks).

Question 4
41 (out of 56) students attempted this question, with only 2 achieving below half marks and only 8 above 75%.
Common issues were with understanding that JPEG compression control is in the quantization table, and there was a lot of concern in part (d) that JPEG compression loses quality (which of course it does, but as most digital cameras use JPEG with very good results this loss is generally negligible!) which distracted answers from the central compute & transmit power issues.