

UG Exam Performance Feedback

Second Year

2018/2019 Semester 2

COMP28512 Mobile Systems

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Comments Q1: A wide range of marks were obtained. The average was respectable but not spectacularly high. Once again, I found it difficult to predict which parts students would find straightforward and which parts they would find more difficult to answer. Parts (a), (b) and (c) were supposed to be straightforward, but they were not well answered. I thought parts (e), (f) and (g) would be more tricky to answer, but they were well answered on the whole. It was surprising how badly part (b) was answered view of the coverage that sampling and aliasing got in the lectures and the laboratory work. Part (c) generated a lot of confused answers which mixed up the concept of a Fourier series and the DFT (and FFT). They are related of course, but explaining a Fourier series is much easier than explaining the complex spectrum obtained from the FFT. Just about everybody gave a correct and clear answer to part (e) which is not so easy to explain in a few sentences. I concluded that maybe students spent a lot of time revising the harder material and took the easier but perhaps more fundamental concepts (like aliasing and Fourier series) for granted.

Q2: Again there was a wide range of marks. Part (a) is harder than it looks; you all know the concepts, but they are not so easily explained. Part (b) was misunderstood by many students. It is primarily about speech digitisation, telephony and the bit-rates employed in different circumstances. Of course CD quality speech is not normally used for telephony, but the question requires a comparison this high standard with the digitisation techniques employed in fixed and mobile telephony. The bit-rates (1400000, 64000 and 13000 b/s) were hardly referred to in the rather general answers that many students gave. Just explaining where these bit-rates come from gives a significant part of the answer required. Parts (c) and (d) were universally well answered.

Q3: This question produced the lowest average. Although the majority did understand it, a significant number (about 20%) of marks of 7 or less out of 20 produced the lower than ideal average. Perhaps this was because it is the last question? There were actually some nice answers to Part (b), but many answers to Part (d) omitted important detail. Anybody who could not answer Part (e) must have slept through the final laboratory exercise (Task 5). One final point about presentation: Many students skip from question to question without warning. While marking question 2 or question 3, I often found part of an answer to a different question that I thought I had finished marking. In more than one case it was not even indicated which question the part answer referred to. There is no problem coming back to an earlier question, but could I request that students indicate clearly which part it is, and also write something like "continued later" when a question is to be continued. I would hate to miss a part of an answer or misinterpret it.
