Examination Feedback for EEE6031Advanced Computer Architecture
Autumn Semester 2012-13

Feedback for EEE6031 Session: 2012-2013

General Comments:

Generally, the paper was badly attempted – despite my belief that the paper was more straightforward than in previous years. There were a number of instances where it was clear that people were writing down things they knew without any real regard to what the question was actually asking.

Question 1:

Some people could not even complete the bookwork sections of this question and this is worrying because this is just learning and remembering.

Despite going over this topic and telling people what they needed to do to construct a Banyan, nobody did it properly. If you cannot reach every output from every input it cannot be right (this was often the case for peoples' answers)

Question 2:

The first parts of this question were answered OK. However, part d (where a lot of the marks were) was not answered well. A few people came up with viable changes but not many.

Question 3:

Part b was answered very badly. This is strange because it is really quite simple. If it takes 170us to process a message, how many messages can be received or transmitted in this time. 10us > 1.5 so it will be 10us per message or 17 messages in 170us. So if there are 17 processors then the system is balanced and all processors/links are used all of the time.

Question 4:

A lot of bookwork at the beginning of this question – again, people did not know the material too well. Again, the calculations in part d were done badly. Reading 4 bytes at a time at 5n per read, the basic rate of reading data is 0.8Gb/s. To exceed 3Gb/s, four words need to be read at once i.e. the memory needs to be interleaved 4 ways so that rather than reading 4 bytes, the memory will deliver 16 bytes per read.
The final part could be calculated using (tlat+(B-1)*ttr)/B < 4/(3x10^9) – the LHS should be familiar – but no one could.