

## CS6810 Midterm #2 Spring 2009 Possibilities

Since the 2<sup>nd</sup> half of the course has been significantly revised there is no way that a previous exam will convey the right sense. Hence I will try and suggest what I am now considering as possible questions. Will they all be there? No is the obvious answer. In general I am shooting for a 2x shorter exam than the first mid-term which was clearly too difficult time-wise. The exam will still have a lot of conceptual questions that I hope will form the basis of what you will retain as part of some persistent general architectural knowledge.

### Possible questions are:

1. Given your HW4 it is reasonable to expect some general questions on the area and performance aspects of various cache configuration choices.
2. You will definitely get a question on snooping based cache consistency and you may well be asked to draw a state machine for some protocol – it won't be something that you've already seen and it will be simpler to make sure that solving the problem isn't too time consuming.
3. You will definitely get a question on distributed directory based shared memory. This will likely be more conceptual since state machines for both global and local state will be too time consuming.
4. You may get a question on transactional memory – if so it will be conceptual.
5. You can expect a question which talks about a interconnect topology and it's effect on hop count, packaging, and perhaps tradeoffs in bisection bandwidth, and average hop-count.
6. You will definitely get a question on routing algorithms so make sure you understand the options.
7. You might get a question which asks you to describe what the key differences are between a regular computer and a supercomputer or vector computer.
8. You will definitely get a question on DRAM but it will be conceptual since we didn't cover enough detail in class to deal with anything in detail which would take too much time anyway.
9. You might get a disk question – if so it will concern RAID organizations rather than detailed disk or storage technology which we only covered in “scratch the paint” mode.
10. You might get an NVRAM question which might ask you to choose a technology under some assumptions for a particular application.

### What's not possible:

Anything that's not on the previous list.