

31251 – Data Structures and Algorithms

Week 12

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- What's in the Exam?
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- WHAT'S IN THE EXAM????!?!?

- 20 Multiple Choice Questions
 - Similar to the Quiz Questions
 - But not identical
- 4 Multi-part Short Answer Questions
- Open book
- 2 hours + 10 minutes reading time
- Saturday 22/6/2019, 9:00am.
- In several rooms: CB11.B2.101-104 & CB11.B3.101-104 (check your personal timetable!!!).

Short Answer Questions

- You will need to be able to read and understand code.
- You will need to know how the algorithms in the subject work.
- You will need to know how to convert an algorithm to (very simple) code. Mostly interested in the logic here.

- Read a small piece of code.
- Interpret it.
- Describe *what* it does in plain English.
 - Don't just repeat the code in English - you have to work out what the point of the code is.

Which algorithms/topics?

- You don't need to be able to reproduce the code.
- You *may* need to know:
 - Stacks & Queues
 - Binary Search Trees
 - Dijkstra's algorithm
 - Graph and tree traversals
 - Simple hash-maps (linear and quadratic probing, division hash function)
 - Minimum Spanning Trees
 - Heaps
 - Sorting Algorithms (Bubble, Selection, Insertion, Quick, Merge, Heap)
 - Basic Computational Complexity definitions
 - Basic asymptotic analysis (big-oh, theta, omega)
- Each question will be on one topic out of these.

- Can bring anything printed on a piece of paper:
 - Text books
 - Notes
 - Lecture Slides
 - Dictionary
- Nothing electronic
- (You can also bring drawing implements if you want)

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