This will be an exam over data structures concepts; programming will be minimized. For example, in 2017 only one of the five questions involved any coding. Here are the structures we have looked at since the first exam:

- Iterators
- Binary Search Trees
- AVL trees
- Heaps and Priority Queues
- Hashing, Hash Tables, and Hash Maps

We have also talked about the $O(\ n\log(n)\ )$ sorting algorithms:

- MergeSort
- QuickSort
- HeapSort

and why $O(\ n\log(n)\ )$ is the best possible worst-case running time for a sorting algorithm that sorts by comparing data values.

For each data structure you should know how it is implemented, how it works, what it is good for, and a Big-O estimate of running times for its algorithms. I will expect you to know details about how the structures work. For example, I could give you an array that currently represents a heap and ask you for the array that would result from adding a specific value to this heap. You should know all of the structures with this level of detail.