Sample Exam summary

Question1

- Growth Rate and Algorithm Effeciency(L'Hˆopital's Rule)
- Master Theorem **(week2)**

Question2

- algorithm analysis (useful formulas) (**week2**)
- divide and conquer(**week5**)

Question3

- dynamic programming
- Floyed's algorithm (**week7**)
- Dijkstra' algorithm (**week4**)

Question4

- decrease and conquer(**week5**)
- Stack(**week1**)

Question5

- hash(**week11**)
- data compression $\rightarrow$ huffman coding algorithm (**week11**)

Question6

- all kinds of sort(**week9**) **merge sort**
- BST(ballanced sorted tree) **(week 10)** (hard)
- pre/in/postorders (**week3**)

Question7

- dynamic programming(**week7**)

Question8

- heap(priority queue) (**week8**)

Others Issues

- topological sort (**week4**)

- DFS(depth first search) and BFS(breath first search) (**week3**)
- string search(**week6**) (no tests)
- complexity problem(**week12**)(no tests)
- prime(MST) (**week5**)

Agenda

1. growth rate and master theorm, basic concepts(queue, graph), warshall algorithm and floyd algorithm, dijkstra
2. all kinds of sort (quicksort, mergesort, heapsort)
3. tree, heap DFS, BFS, prime, pre/in/post orders, **BST**
4. hash topological sort, **dynamic programming.**