# CS 5633: Analysis of Algorithms

### Exam 2, Practice Problems

Page and problem numbers are with respect to the 3rd edition of our text book.

#### • Sorting

- Page 193: 8.1-1
- Page 196: 8.2-1,2,3
- Pages 199-200: 8.3-1,2,3,4
- Page 206: 8-2,3

#### • Order Statistics

- Pages 219-220: 9.2-3,4
- Pages 223-225: 9.3-5,7,8 and 9-1,2

#### • Red-Black Trees

- Page 311: 13.1-1,2,3,4,5,6,7
- Page 313: 13.2-1,3,4
- Page 322: 13.3-1,2,3,5

#### • B-Trees

- Page 490: 18.1-1,2,3,4,5
- Page 497: 18.2-1,2,3,6

#### • Augmenting Data Structures

- Page 344: 14.1-1,2,3,4,5
- Page 347: 14.2-1,2,3
- Pages 353: 14.3-3,5

#### • Range Trees

 Not covered in text. Be sure to know how to build a 1D range tree and how to search a range tree.

## • Dynamic Programming

- Page 389: 15.3-2,5

- Page 396: 15.4-1,2,3,4,5

- Page 406: 15-3,6