Homework 7:

1. Using moment generating functions, show that for a Brownian motion $W(t)$:
$$\mathbb{E}[W^4(t)] = 3t^2$$

   From the Textbook (Shreve volume II): Pick 4 of these, the remaining two can be done for a total of 10 bonus points (5 points each).

2. Problem 2.2

3. Problem 2.4

4. Problem 2.6

5. Problem 2.8

6. Problem 3.2

7. Problem 3.4