Note: This is not meant to be an all comprehensive guide. The test may cover material not mentioned in this study guide. This is just to give you something to aid you as you study.

6.1
- Know how to find the area between two curves
- Know how to deal with the area between two curves when the curves criss cross

6.2
- Know how to find volumes of rotation using the disk method
- Know how to do volume problems that require integrating with respect to y
- Be able to solve volume problems that have cross sectional areas that are squares, triangles, circles, etc.

6.3
- Be able to find volumes of rotation by the shells method
- Be able to recognize when shells is better to use then disks

6.4
- Know the formula for work
- Be able to find work done in both SI units and standard English units
- Know how to find the amount of force required to hold a spring at a given length
- Know how to find the amount of force required to lift a chain
- Know how to find the amount of force required to pump fluid out of a tank

6.5
- Know how to find the average value of a function
- Know the statement of the Mean Value Theorem for Integrals and how to find a value $c$ satisfying the theorem for a given function
7.1

- Know how to do integration by parts for both indefinite and definite integrals

7.2

- Know how to integrate products of sines and cosines
- Know how to integrate products of tan and sec
- Know the integral for tan
- Know the integral for sec
- Know the equations in the red box on page 465

7.3

- Know the substitutions in the box on page 467
- Be able to integrate problems using these methods

7.4

- Know how to do partial fraction decomposition
- Know how to do example 3
- Know the box on page 478
- Know how to do example 9

7.5

- Memorize the integrals on page 484 or know how to derive them

If you can do new problems similar to those in the homework and examples in the book, you should do well on the test.