**CSCI 2150L**

**Lab Assignment 5:**

**Assigned: 11/11/2015, Wednesday**

**Due: 18/11/2015, Wednesday**

**Fall 2015**

**Grade out of: 150**

1. Write a menu - driven program in MATLAB to approximate the integral below by following Rules:
2. Trapezoidal Rule using 6 trapezoids.
3. Simpson’s Rule using 6 slices.

***Incrementally* plot both the functions and highlight area under the curve.**

1. Approximate the value of the integral: with a Riemann sum, using three sub-intervals and right endpoints

***Incrementally* plot the function and highlight the area under the curve.**

* I expect everyone to submit a working and well commented program.
* Your Menu should have 3 choices, Trapezoidal, Simpson’s and Reimann’s method. Once the user selects one of these then he should be prompted to enter the equation, upper and lower limit of the function.
* Your plot has to be incremental which means for Question 1 I should be able to see incremental filling of graphs.
* Do not use any in-built Matlab function for approximation by Trapezoidal rule, Simpson’s rule or for Reimann’s method.
* Please provide execution instructions in your program at the top of your Matlab file as comments.
* Submit a single MATLAB file with name Assignment5.m and both the questions should be in one .m file, implemented in a menu driven way. I expect everyone to know what a ‘menu-driven’ program means given that you all are Computer Science students. Those who are not aware of the term ‘Menu-driven’ please search about it on the internet.
* Please upload only the MATLAB file in the dropbox in the folder named Assignment 5.
* ***Your program must be your own work. Referencing to others’ code is not allowed. Plagiarism and other forms of academic dishonesty will be handled within the guidelines of the Student Handbook and reported to the University.***