MAT 331 Fall 2017, Practice Quiz 3
Quiz 3 on Thursday, Oct 11, 2018 (30 minutes)

Name	ID	Score

This quiz will have a different format than the previous ones. I will create a file that you will download from the webpage onto your computer. Then load the file into MATLAB. The file contains examples of adjacency matrices of graphs with names like g1, g2, g3, ... For this practice quiz use (there is a link in the Oct 4 scripts):

    http://www.math.stonybrook.edu/~bishop/classes/math331.F18/Scripts/Oct4/graphs.mat

The quiz itself will ask questions that either have a numerical answer or a yes/now answwer. There are 12 questions and each is worth 5 points (a total of 60, like before). Each question is worth 0 or 5 (no partial credit).

(1) [____] How many vertices does g1 have?

(2) [____] How many edges does g2 have?

(3) [____] What is diameter of g20?

(4) [____] Give two vertices that are the maximal distance apart in g20?

(5) [____] How many connected components does g8 have ?

(6) [____] What is the size (number of vertices) of the largest component of g9?

(7) [____] What is distance between vertices 1 and 5 in g6?

(8) [____] Is g4 a tree? (yes/no)

(9) [____] What is the highest degree vertex in g5?

(10) [____] How many points are exactly distance 5 from vertex 1 in g6?

(11) [____] g5 has 100 vertices. How many edges connect some vertex between 1 and 50 with a vertex between 51 and 100?

(12) [____] How many paths of length 20 go between vertices 1 and 4 in the graph shown below?