Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. The Excel file will be handed in via Canvas. Your name will only appear on a page of the file that has nothing else on it. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes (but you can take the full 2 hours.) Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes.

1) Answer **ALL** parts of this question. **Type all explanations in a box on the spread sheet.**
A) (4 points) Run a regression using the data in the tab **Q1** in the Excel file to predict the sales of pies, Q_{pies}.
B) (2 points) Use the results to predict the sales of pies if the person's income is $40,000.00, the price of a pie is $10/pie, the price of a cake is $15/cake, and the price of a donut is $2/donut. Briefly explain how you chose reached that conclusion.
C) (6 points) Do you think the overall results are good? Explain your answer
D) (6 points) Do the test for multi-colinearity. Is there a problem with it? Explain how you reached the conclusion. **If there is multi-colinearity**, then explain how you solve the problem without actually doing it. Explain why you chose to do that. **If there is not a problem with multi-colinearity**, then for each variable, tell me whether or not it is significant and how you reached that conclusion.

2) Answer **ALL** parts of this question. **Type all explanations in a box on the spread sheet.**
A) (4 points) Run a regression using the data in the tab Q2 in the Excel file to predict the sales.
B) (6 points) Do the quick tests for both auto-correlation and heteroscedasticity. For both of them, tell me if you think there is a problem with it and the logic you used to reach that conclusion.
C) (10 points) **If you find both auto-correlation and heteroscedasticity**, then do the formal test for heteroscedasticity. Explain what you did, why you did that, and how you reached your conclusion as to whether or not it exists. **If you find auto-correlation but not heteroscedasticity**, then tell me by looking at the graph whether or not the method I proposed for solving the problem would work. Explain your logic. **If you find heteroscedasticity but not auto-correlation**, then do the formal test for heteroscedasticity. Explain what you did, why you did that, and how you reached your conclusion as to whether or not it exists. **If you find neither, check again because one does exist.**

3) (10 points) Answer EITHER Part A OR Part B.
A) Without drawing a graph, explain why an economic boom in one country can cause an economic boom in another country.
B) Explain why absolute PPP might hold.

4) (12 points) Answer EITHER Part A OR Part B.
A) Explain the hysteresis explanation of the natural rate of unemployment.
B) Explain how menu costs can cause price stickiness.

5) (14 points) Answer EITHER Part A OR Part B.
A) Without using a graph, explain how the efficiency wage will cause wage rigidity. Is that real-wage or nominal-wage rigidity? Explain your logic.
B) Without using a graph, explain how the COLAs in multi-year contracts will cause wage rigidity. Is

that real-wage or nominal-wage rigidity? Explain your logic.

6) (14 points) Answer EITHER Part A OR Part B.
A) Draw the augmented SRPC/LRPC diagram for an economy with 3.5% unemployment and 6% inflation. State how you found where on the graph the economy is. Given your diagram, what do you estimate the expected inflation was? State how you found that. Illustrate the effects of the Fed increasing the money supply 3%, announcing that they are increasing the money supply 3%, and people believe them. Explain why the curve(s) moved as drawn and how you found the new point which the economy is at.
B) Draw the augmented SRPC/LRPC diagram for an economy with expected inflation of 4.5% and unemployment of 5%. State how you found where on the graph the economy is. If the Fed decides to increase the money supply 3%, but people change their beliefs to expect that inflation will be 5.5%. Explain why the curve(s) moved as drawn and how you found the ending point. Given your diagram, what do you think the final inflation rate and unemployment rate are? State how you reached your conclusion.

7) (14 points) Draw the supply/demand for the US dollar, $, with the Japanese yen, ¥, as the other currency. Illustrate EITHER the effects of the event in Part A OR the effects of the event in Part B. Explain why the curve(s) moved as drawn. Which currency appreciated? Explain your logic.
A) Prices in Japan go up more than expected.
B) The Japanese GDP grows 1.7%.