

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.

A) (4 points) Run a regression using the data in the tab **Butter** in the [Excel file](#) to predict the sales of butter.

B) (2 points) Use the results to predict the sales of butter if the person's income is \$40,000.00, the price of bread is \$3/loaf, and the price of butter is \$4/lb. 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.

A) (4 points) Run a regression using the data in the tab **Cats** in the [Excel file](#) to predict the sales of cats.

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.

3) (10 points) Answer EITHER Part A OR Part B.

A) What is meant by *TIP*? Explain how it could help control inflation.

B) What is meant by *hysteresis*? Explain how that cause the natural rate of unemployment to be high.

4) (10 points) Answer EITHER Part A OR Part B.

A) What is one example of a cause of **nominal** wage or nominal price rigidity? Explain how that will cause nominal price rigidity.

B) What is one example of a cause of **real** wage or nominal price rigidity? Explain how that will cause real price rigidity.

5) (14 points) Answer EITHER Part A OR Part B.

A) Suppose the expected inflation rate is 2% and the unemployment rate is 5%. Draw the SRPC/LRPC diagram. As you have heard, the coke plant in Follansbee is closing. Pretend it closed last year and that

all of those people are still unemployed. If there is a job training program to give those employees new skills, then what would happen to the graph? Illustrate that on the graph. Explain your logic as to why the curve(s) moved as drawn.

B) Suppose the expected inflation rate is 3% and the unemployment rate is 7%. Draw the SRPC/LRPC diagram. Suppose that the money supply increases 8% and people change their expectations to having the money supply increase 8%. Show the impact of those two events on the graph. Explain why the curve(s) moved as drawn. Find the initial point and the ending point. Explain how you found those points.

6) (14 points) Both of the schools of thought predict the cyclical nature of one variable wrong. For EITHER the Neo-Keynesian School OR the Neo-Classical a.k.a. Rational Expectations School, what is the variable they predict wrong? Use a graph to show their prediction. Explain how that graph gives their results. Also explain how they explain how the data can be explained.

7) (14 points) Answer EITHER Part A OR Part B.

A) The Neo-Classical Model, a.k.a. Rational Expectations Model concludes the neutrality of money holds in both the short-run and the long-run. However, the fact that both the Conference Board and the AIER use money as a leading indicator, would imply money is non-neutral. How do neo-classical economists explain the data?

B) The Neo-Classical Model, a.k.a. Rational Expectations Model concludes the neutrality of money holds in both the short-run and long-run. Use the expectations augmented LRAS/SRAS/AD diagram to explain why it holds in the short-run.