

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. The Excel file will be handed in via Moodle. 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 on the assignment and failure to type it will cost you 10 points.

All questions, except for #1 and #2, should be done before the laboratory.

- 1) (25 points) Run the regression using the data in the first four columns of the Excel file [lab6.xls](#). Remember the proper way to use the time to predict the quantity. Would you be willing to rely on this information to estimate the quantity over time? Why or why not?
- 2) (25 points) Use the data in columns H - K to forecast quantity as a function of year, price, and income. Check for multi-collinearity of the independent variables. Is it acceptable to leave both variables in? Why or why not? **If it is not acceptable**, re-run the regression without one variable and tell me why you left that variable out. **If it is acceptable**, then tell me how much you would expect to sell to a person with an income of \$50,000 if you charged \$10/unit in 1960.
- 3) (25 points) Discuss three problems with high unemployment other than reduced output. Explain how high unemployment causes them.
- 4) (10 points) Explain why the natural rate of unemployment rate unemployment is lower in Japan than in the USA.
- 5) (15 points) Give the hysteresis theory of the natural rate of unemployment.