Econ 3324 Spring 2015
Managerial Economics R. Claycombe

Second Exam

Write all answers in your blue book and show all work there. Return your exam and printout(s) in your blue book.

12 pts.

1) True or false, why?

a) "The more variables in the model, the better. The R^2 will go up and that's what really matters."

b) "The best way to estimate demand is to survey the public about what they will buy and what they will pay."

14 pts.

2) Suppose that you have the following print out for a demand function.

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	490897.9	4472748	0.109753	0.91406
Income	5319.469	2803.76	1.897263	0.3362
Price	-5.56	1.146313	-4.85033	1.45E-04
Competitors' Advertising	5.77714	2.865195	2.016317	0.027357
Competitors' Price	134560.8	30536.47	4.40656	0.002023

a) Which of the variables are statistically significant? ($\alpha = .05$)

b) Considering what you see here, what serious econometric problem do you seem to have?

20 pts.

3) Suppose the production function is $Q = 50L - 2L^2 + 300K - .4K^2$ and that prices of labor, capital and the product are all 5 dollars.

a) Use the solver to find the profit maximizing Q when K is fixed at 100.

b) Use the solver to find the profit maximizing Q in the long run.

c) Put fields in your spread sheet that convince the reader that you found the optimum.

20 pts.

4) a) Draw a well-labeled quadratic cost function and suggest a kind of cost function that might have this shape.

b) Now add another cost function to the diagram that depicts a higher factor price level and suggest how changing factor prices can make cost curve estimation more difficult.

c) Suggest a situation where the quadratic shape might be used to estimate a total cost function and the limitation of that one would have to accept for the use of the model.

20 pts.

5) Suppose that you have two products and fixed cost of 3000.

a) Given the data below find the contribution of each product to profit (and overhead).

b) Given what you found in part a, find profit and say if it is satisfactory or not. Say what you are assuming that fixed cost includes.

c) Suggest a way that the fixed cost might be allocated to the products and say what that suggests about the wisdom of continuing to produce each product.

Product A: $P = 20$, $VC = 5Q + .1Q^2$

Product B: $P = 30$, $VC = 8Q + .05Q^2$

14 pts.

6) Suppose that our firm sells in two markets where $Q_{DA} = 100 - 2P$ and $Q_{DB} = 200 - P$ and that $TC = 20 + 15Q + .5Q^2$

a) Find the profit maximizing prices in the two markets.

b) Now suppose that the firm gets another plant with the same cost function as the first one. Describe how this changes the prices.

I have neither given nor received unfair aid on this test nor am I aware of anyone else who has.

_____