Econ 3324 Spring 2006

Managerial Economics R. Claycombe

First Exam

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

30 pts.

1) You have two sports investment opportunities, the return of which depends on the success of the teams. You figure the probabilities as follows.

	Ravens			O's	
% Wins	Prob.	Profit	% Wins	Prob.	Profit
>.6	.15	800	>.5	.4	400
.6 to .5	.5	400	.5 to .3	.5	300
< .5	.35	100	< .3	.1	200

The Raven's profit payout starts 6 months from now and is paid continuously over the period of a year. The O's payout comes in a lump sum paid immediately. Your discount rate is .05. The investment amount is the same for each and is paid now in each case.

a) Find the present expected value of profit in each case and indicate which option is superior on this basis.

b) Now find the standard deviation of profit for the O's investment and use it to find the coefficient of variation.

c) If $\sigma_{Ravens} = 100$, indicate which option is superior using the coefficient of variation and the certainty equivalent, assuming a MRS of .5.

25 pts.

2) Suppose that $Q_D = 10000 + 4*Income - .1*Price$

a) If Income = 1000 and Price =20000, find the elasticity of demand.

b) From what you see in part a could 20000 be the profit maximizing price? Why?

c) If MC is constant at 10000, find the profit maximizing price (Income still = 1000).

10 pts.

3) Currently AFC = 2, AVC = 3 and P = 5. The boss proposes that price be cut to 4.50 and that more profit will made that way. Can that be right? Explain.

Over

10 pts.

4) Suppose that there is a 20 percent chance that profit will be 50000 next year and that there is a 30 percent chance that the 50000 will be followed by 60000 the year after that. What is the present value of that profit stream if the profit flows evenly over the years (r = .06)? What is the probability that that sequence will occur?

25 pts.

5) Suppose that your demand equation is $Q_D = A*Price^{a}Income^{b}$.

a) Show the log form of this equation that can be used in linear regression.

b) Show that the exponents in the equation are elasticities.

c) Would you be surprised to find a high degree of colinearity in such a model? Why?

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

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