

First Exam

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

20 pts.

1) Mr. X. has rental income coming in at \$600 for each of the next four months. It's due on the first day of the month. He makes money from his vending stand more or less on a daily basis at a 20,000 dollars per year. He'll do this for the next two years and then sell it for 30,000 dollars. What is the present value of all these funds, if the discount rate is 5%. You will need to use your regular materials to look up some of these rates.

30 pts.

2) Mrs. Y has to choose between a serious advertising strategy and a humorous one for a professional ball team. The profit depends depends on how the team is doing. The following table gives the facts as they are known.

Profit as a Function of Strategy and Record		
Team Record	Serious	Humorous
Good (.6)	800	1000
OK (.2)	600	650
Bad (.2)	400	0

- Find the expected value and σ of profit for each strategy.
- Use three methods to choose among the strategies that we have studied and say which strategy is better for each one.
- The team owner prefers humorous ads. What MRS does he need to have for the strategies to have the same certainty equivalent.

20 pts.

- If $Q = AP^a A^b I^c$, what is the price elasticity? Show how you know.
- $TC = 10 + 20Q - Q^2 + .1Q^3$. At what Q is MC minimized.
- $P = 10 - Q/2$, find the price elasticity when $P = 7$.

Over

20 pts.

- 4) a) If $e_p = -2$ and price goes up by 10%, what will happen to quantity? Will total revenue go up or down? Why?
- b) If $e_I = 1.5$, do we have a normal good? Why? If income goes up by 5%, how much can price go up without taking quantity below where it started. The $e_p = -1$.
- c) If P goes from 100 to 125 and that drives Q down from 10,000 to 12,000, what is the arc price elasticity and marginal revenue in that range of demand.

10 pts.

- 5) a) Use an indifference curve diagram to show that strategies with the same coefficient of variation can have different certainty equivalents.
- b) Which measure do you think is a better measure of a strategy's value? Why?

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