Wilfrid W. Csaplar Jr., Ph.D.   Economics 280   Final Exam   2008/5/14

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet.
Failure to follow these directions will cost you 1 point. The test has 240 points (to be scaled down to 160
points) and is scheduled to take 120 minutes. Therefore, expect to spend 1 minute for every 2 points.
For example, a 12-point question should take 6 minutes. I can give some extra time, but not much.

1) (10 points each) Use the regression statistics on the last page to answer THREE of these questions.
The regression was estimating the quantity demanded for apples.
A) Are the overall regression results reliable? Explain your logic.
B) Which variables are significant? Explain your logic.
C) Given the results, are bananas and apples substitutes, likely substitutes, likely complements,
complements, or of an indeterminate relationship? Explain your logic.
D) Write the equation which would be used to predict the sales of apples if the price of apples is $2/lb,
the price of bananas is $1/lb, the price of grapes is $1.5/lb, and your income is $30,000. Do NOT do the
calculation, but explain how you got it.
E) Calculate the income elasticity of demand if income is $20,000 and 40 were bought. Show all work.

2) (12 points) Answer EITHER Part A OR Part B.
A) Why isn't the profit-maximizing output the same as the revenue-maximizing output?
B) Explain the economic reason why P>MR for all firms facing a downward sloping demand curve.
Using an equation is not enough, you must also explain economic reasoning.

3) (18 points) Draw the supply and demand for wheat. Illustrate EITHER an increase in the price of
ethanol (from corn) OR an increase in the price of diesel. Explain why the curve(s) moved as drawn.
What happens to the price and quantity of wheat? (Of interest both of these are currently happening.)

4) (18 points) Use the payoff matrix to the right to
find the following if they exist: each person's
dominant strategy, the Nash equilibrium or equilib-
ria, cooperative equilibrium, and each person's
secure (safe) strategy. Briefly explain how you got
each one. If one does not exist, explain how you
know it does not exist. You can write on the matrix
itself. (Note that this payoff is not an expression of
opinion about the actual payoffs, but rather just
fictitious numbers I created for fun.)

		Hillary	
		Continue	Quit
Barak	Con-tinue	50	0
		100	150
	Quit	200	-10
		110	-30

5) (18 points) Answer EITHER Part A OR Part B.
A) If the income elasticity of demand for computers is 0.9, then what does that tell us about cameras? If
the price elasticity of demand for cameras is -1.2, then what does that tell us about cameras?
B) Suppose that at a price of $100/unit, you sell 400 and at a price of $120/unit, you sell 480. Calculate
the elasticity of demand using both the point elasticity and the arc elasticity. Show all work and briefly
explain what you did.

6) (18 points) Answer EITHER Part A OR Part B.
A) Suppose that you are in your room. Your roommate's parents will be stopping by later today and the room is a mess. You have a choice to clean the room or not. Then you will leave and your roommate will come back. If you have not cleaned the room, they will have a choice to clean the room or not. If you cleaned it, they will not need to clean it. Having a clean room gives you 50 utils of happiness and your roommate 200 utils of happiness. The process of cleaning gives -20 utils of happiness to the person doing the cleaning. A dirty room gives 0 utils of happiness. Set up the decision tree. Briefly explain why you filled it in as you did. What is the equilibrium? Explain your logic.
B) Create and use a payoff matrix to explain why cartels fall apart. Explain how your matrix shows that they fall apart. (Hint: This is basically the *Prisoners' Dilemma*.)

7) (22 points) Copy the table to the right into your answer book. Fill it in. Show all work and if there is no work, briefly explain how you got the answer.

8) (22 points) Illustrate EITHER the event in Part A OR the event in Part B on the ATC/AVC/AFC/MC. Explain why the curves moved as drawn.
A) The cost of inventory insurance increases.
B) The price of health insurance increases.

Q	TR	AR	MR
0			
2	10		
4		5	
6			8
	46		10

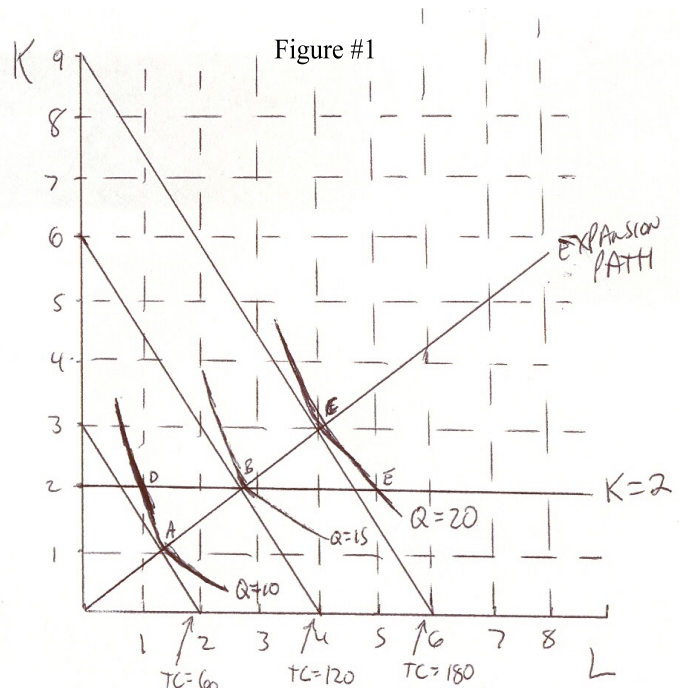9) (22 points) Answer EITHER Part A OR Part B.
A) Draw an indifference curve/budget constraint which has the price of balloons greater than the price of roses. Draw an increase in the price of roses. **Do not find income and substitution effects.** Given your drawing, are balloons and roses substitutes or complements? Explain how you know which price is higher, how you know that you showed the price of roses going up, and how you determined if they are substitutes or complements.
B) Draw the MP_L/AP_L diagram. Explain why the curves take their shape.

10) (30 points) Answer EITHER Part A OR Part B.
A) Draw diagram for a dominant firm with a competitive fringe. Explain how you got the dominant firm's demand curve, how you got its marginal revenue curve, the dominant firm's output, the fringe's output, the industry output, and the price.
B) Use Figure #1 to find the wage rate, rental rate, two points on the LRTC curve, and two points on the SRATC curve. Briefly explain how you got each answer and show all work.

11) (30 points) Answer EITHER Part A OR Part B.
A) Draw the ATC/AVC/MC/D/MR diagram for a perfectly competitive firm who is losing money but still in business. You do not need to draw the in-

Figure #1

dustry curves. Find the quantity they are producing. Find their losses. Show they would have even greater losses if they shut down. Explain how you found the quantity, their losses, and their losses if they shut down.

B) Draw the D/MR/ATC/AVC/MC diagram for a monopolistically competitive firm which is making positive profits. Find the quantity produced and the price charged. Explain how you found them. Find the firm's profits and explain how you found it. Illustrate what happens over time. Explain why the curve(s) moved as drawn.

Regression Statistics

Multiple R	0.824155
R Square	0.679231
Adjusted R Square	0.650718
Standard Error	125.8221
Observations	50

Analysis of Variance

	df	Sum of Squares	Mean Square	F	Significance F
Regression	4	1508522	377130.5	23.82199	1.26e-10
Residual	45	712403.7	15831.19		
Total	49	2220926			

	Coeffic-ients	Standard Error	t Statistic	P-value	Lower 95.00	Upper 95.00
Intercept	94.39684	36.03275	2.619751	0.011681	21.82316	166.9705
Papples	-1.7407	64.91124	-0.02682	0.978715	-132.479	128.9972
Pbananas	-8.7501	29.82474	-0.29338	0.770468	-68.8202	51.32001
Pgrapes	117.0584	29.88729	3.916662	0.000278	56.86233	177.2545
Income	0.000233	0.000052	4.50649	0.000041	0.000129	0.000338