Wilfrid W. Csaplar Jr., Ph.D. Economics 280 Exam #2 2007/02/23

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 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes. I cannot give extra time because some students have a class after your class.

1) (8 points) Answer EITHER Part A OR Part B.
A) What do you think is the value of the own-price elasticity of demand for apples? Why did you choose that number?
B) What do you think is the value of the income elasticity of demand for hamburger? Why did you choose that number?

2) (10 points) For ONE of the following elasticities, calculate it using the table to the right. Briefly explain how you chose the two data points you used and show all work. What does that information tell us about the product(s)?
A) Income elasticity using **point** elasticity.
B) Cross-price elasticity using **arc** elasticity.

Data point	P_x	P_y	Income	Q_x
A	\$4/X	\$2/Y	\$30,000	10
B	\$3/X	\$4/Y	\$20,000	8
C	\$3/X	\$4/Y	\$40,000	10
D	\$5/X	\$4/Y	\$20,000	12
E	\$5/X	\$5/Y	\$20,000	8

3) (10 points) Answer EITHER Part A OR Part B.
A) We will prove later that firms want to produce where there is a positive marginal revenue. Therefore, do they want to produce in the elastic or inelastic part of the demand curve? Explain your reasoning using an appropriate equation.
B) If the income elasticity of demand is 0.4 and the average income of a customer goes up 10%, then how much would you expect your sales to increase? Explain your logic.

5) (14 points) Answer EITHER Part A OR Part B.
A) What type of product would you use a consumer survey for? Explain your logic.
B) Suppose that your income is \$100, the price of lights is \$20/light, and the price of mugs is \$4/mug. Draw the budget constraint for this case. What is the slope? Briefly explain how you drew the line and found the slope.

4) (28 points) Answer EITHER Part A OR Part B.
A) Draw an indifference curve/budget constraint diagram for cats and dogs. Illustrate an increase in the price of cats on the diagram. Explain why your curve(s) moved as drawn. Draw another line to determine the income and substitution effects. Explain how you know where the income and substitution effects are. Given your drawing, are the cats and dogs substitutes or complements? Explain your logic.
B) Draw an indifference curve/budget constraint diagram for basketballs and volleyballs. Illustrate an decrease in the price of volleyballs on the diagram. Explain why your curve(s) moved as drawn. Draw another line to determine the income and substitution effects. Explain how you know where the income and substitution effects are. Given your drawing, are either of the goods inferior? Explain your logic.

6) (10 points each) Use the table on the back to answer THREE parts of this question. The regression is to predict the sales of apples.

A) Are the overall regression results reliable enough for you to go by? Explain your answer.
B) Suppose you charged $2/apple and sold 250 apples. What would the own-price elasticity be? Show all work and briefly explain your logic. Do not worry about whether the results are significant.
C) Are oranges and apples substitutes, likely substitutes, complements, likely complements, or not enough information? Explain your logic.
D) Assuming the price of advertising is correct, would you advertise? Explain your logic.
E) What is the equation you would use to predict the sales of apples? Briefly explain how you derived it.

Regression Statistics	
Multiple R	0.90348814
R Square	0.81629081
Adjusted R Square	0.79541477
Standard Error	40.0138727
Observations	50

Analysis of Variance

	df	***Sum of Squares***	***Mean Square***	***F***	***Significance F***
Regression	5	313031.3808	62606.2762	39.1018	4.083e-15
Residual	44	70448.8403	1601.1100		
Total	49	383480.2211			

	Coefficients	***Standard Error***	***t Statistic***	***P-value***	***Lower 95.00***	***Upper 95.00***
Intercept	-364.3845	316.6732	-1.1507	0.2555	-1002.5974	273.8285
P apples	-130.0081	81.5613	-1.5940	0.1174	-294.3841	34.3679
P oranges	154.7931	88.8019	1.7431	0.0876	-24.1754	333.7615
P melons	39.9214	83.6042	0.4775	0.6351	-128.5717	208.4145
Income	0.4191	0.1830	2.2897	0.0264	0.0502	0.7880
Advertising	159.9736	80.1105	1.9969	0.0514	-1.4784	321.4257