Wilfrid W. Csaplar Jr., Ph.D. Economics 163 Final Exam 2016/12/16

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 200 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 extra time but not much. I will not grade what is written on this sheet.

1) (10 points) Explain why maximization implies EITHER MPL/w = MPK/r OR $MU_X/P_X = MU_Y/P_Y$.

2) (10 points) Answer EITHER Part A OR Part B.
A) I know somebody who received a $50 gift card for a store he does not like what they sell. He gave away the gift card to somebody because he was not going to use it. What was his opportunity costs of giving it away? Note, there are several correct answers, so what is important is how you argue.
B) Who is more likely to clip coupons, a rich person or a poor person? Explain your logic using terminology from this course.

3) (12 points) Answer EITHER Part OR Part B.
A) What is a credence good? Give an example. What type of advertising would you do? Explain your logic.
B) Why do perfectly competitive firms and monopolistically competitive firms make zero economic profit in the long run? Why doesn't that logic apply to oligopolies and monopolies?

4) (14 points) Answer EITHER Part A OR Part B.
A) Suppose a project would cost $400, benefit 200 people $3 each and hurt one person $100 through a negative externality. Should this project be done? Explain your logic. Would voting result in the project's being done? Explain your logic. Would the market result in the project's being done? Explain your logic.
B) If there were no externalities of any sort, do you think it matters whether the market or public choice (voting) decides whether or not the project will be done? Explain your logic.

5) (14 points) For EITHER a perfectly price discriminating monopolist OR a monopolistically competitive firm, explain how the price and quantity compare to a perfectly competitive industry. Why does that occur? Is there dead weight loss? Explain your logic. You do NOT need a graph.

6) (16 points) For EITHER the event in Part A OR the event in Part B, illustrate the effects of it on the supply and demand for cars. Explain why the curve(s) moved as drawn. What happens to the price of cars and the quantity of cars sold?
A) The price of a steel desk goes down.
B) The wage rate of the workers (on the assembly line for cars) goes down.

7) (16 points) Answer EITHER Part A OR Part B.
A) Draw the MRPL/MFC diagram for a monopoly in a perfectly competitive labor market. Do not worry about the industry labor market. Illustrate the effects of an increase in the amount of

capital. Explain why the curve(s) moved as drawn. What happens to the wage rate and the amount of labor hired?
B) Draw the ATC/MC/D diagram for a natural monopoly. Find the quantity produced, price, and profits. Explain how you found them and why other firms won't enter the market despite this firm's profits.

8) (16 points each) The table to the right can be used to calculate three different elasticities. For each elasticity, there is only one pair of rows which will work. For TWO of the following elasticities, tell me which two rows you are using for that elasticity and why you chose those two. Then calculate the elasticity. Show all work. What does that number tell you about milk and/or cookies? How do you know? These numbers are made up, so the information gotten may not be the real world situation. You may want to look at the next question before answering this question.

P_{milk}	$P_{cookies}$	Income	Q_{milk}
1.00	1.00	1000	100
2.00	2.00	2000	200
2.00	1.00	1000	50
2.00	4.00	2000	100
2.00	2.00	6000	300

A) Own-price elasticity, E_P, using the point formula.
B) Cross-price elasticity, E_{XY}, using the arc formula.
C) Income elasticity, E_I, using the arc formula.

9) (10 points) Answer EITHER Part A OR Part B.
A) For the elasticity you **did not answer** in Question #8, what value do you think that elasticity would have in the real world. Explain your logic.
B) What value do you think is the elasticity of supply, E_s, for a toothpick manufacturer? Explain your logic.

10) (16 points) Answer EITHER Part A OR Part B.
A) Suppose you were stupid enough to play the lottery and won $1 million per year for 25 years and did not take the one time payment. Set up the equation that could be used to calculate the value of what you won. Briefly state how you determined what goes where. If you need some missing information, make an assumption about the value and state why you chose that value.
B) Suppose a bond has a face value of $1000 with a maturity date in three years. The coupon rate is 10% with interest paid annually. Suppose you paid, $1050 for it. Set up the equation which would you could use to figure out the return you are earning. Without doing the calculation, do you think the return is greater, less than, or equal to 10%? Explain your logic.

11) (18 points) Answer EITHER Part A OR Part B.
A) Use the table below to calculate the HHI and the CR4. Show all work. The numbers are the sales of the specific firms.

Firm #	1	2	3	4	5	6	7	8	9
Sales	10	10	80	100	100	100	100	200	300

B) Find the Nash equilibrium and the cooperative equilibrium. Does either band have a dominant strategy? Explain how you reached all of your conclusions.

		Less Than Jake	
		Medium Price	Low Price
Dropkick Murphys	High Price	1 6	4 7
	Low Price	5 8	6 3

12) (20 points) Answer EITHER Part A OR Part B.
A) Fill in the table to the right. Show all calculations. If there is no calculation, then state how you got the answer.

Q	TC	TVC	TFC	ATC	AVC	AFC	MC
10	900		240				50
						20	60

B) For new firms, are sole proprietorships or LLCs the most common type? Explain why people prefer them. Give two reasons.

13) (24 points) Answer EITHER Part A OR Part B.
A) Draw the supply and demand for doors. Draw the effects of a quota on doors. Find the new consumer surplus, producer surplus, dead weight loss, and any other area you feel is relevant. Explain how you found each of them.
B) Draw the supply and demand for gasoline. Draw the effects of a tax on gasoline. Find the new consumer surplus, producer surplus, dead weight loss, and any other area you feel is relevant. Explain how you found each of them.

14) (28 points) Answer EITHER Part A OR Part B.
A) Draw the industry supply and demand for a perfectly competitive industry. Beside it, draw the ATC/AVC/MC/D diagram for one firm in the industry. Draw the diagram such that it is in the long-run equilibrium. State how you know it is in the long-run equilibrium. Illustrate the short-run effects of a decrease in the salaries of all CEOs in that industry on both graphs. Explain why the curves moved as drawn. What has happened to the quantity sold, price charged, and the profitability of the firms?
B) Draw the ATC/AVC/MC/D diagram for a monopolistically competitive firm which is making zero economic profit. Find the price and quantity. Explain how you found them and how you know they are making zero economic profits. Illustrate the short-run effects of an increase in shipping costs. Explain why the curve(s) moved as drawn. What happens to the price, quantity, profits in the short-run?

Happy Holidays. I hope you enjoy the break.