Principles of Economics I: Microeconomics – Quiz 2 [12/27/14]

Note: You have 2 hours (9:10am-11:10pm), and there are 100 points. Allocate your time wisely.

Part I: True or False (and Briefly Explain Why) (5 questions, 25%)

1. To make a natural monopolist behave more efficiently, subsidies will work better than price controls.
2. Suppose the hourly wages of apple pickers in Beekok are paid in terms of apples. A rise in the demand for apples has no effect on the productivity of apple-pickers and hence no effect on the demand for apple pickers.
3. Workers who like their jobs will be more productive at the margin than those who don't.
4. Excess capacity characterizes firms in monopolistically competitive markets, even in situations of long-run equilibrium.
5. A dairy farmer must be able to calculate sunk costs in order to determine how much revenue the farm receives for the typical gallon of milk.

Part II: Economics in the News (75%)

A. (25%) Cooking Oil's Surge Shows How Inflation Hits Chinese (從中國人的廚房看通貨膨脹)

Read the following excerpts of an article of Wall Street Journal on 2011/1/4 by James T. Areddy:

> These days, Liu Chuansheng nervously scouts five locations before he buys cooking oil, illustrating how a sudden spike in the price of the Chinese kitchen's most vital ingredient has become close to a national crisis.
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> On a recent Friday, the 33-year-old, who runs a breakfast stand with his wife, wheeled a shopping cart into the aisle of a C.P. Lotus Corp. store in northern Shanghai, eying only prices. In seconds, his wife emptied the shelves of its 11 remaining bottles of Cofco Ltd. 'Five Lakes' soybean oil, the discount choice at 47.90 yuan, or about $7.20, for five liters (1.32 gallons).
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> At the checkout, Mr. Liu separated their $79 purchase into three batches to sidestep the store's four-bottle maximum and government bans on hoarding. To transport the provisions to their food stand, Mr. Liu placed two bottles into the basket of his blue electric scooter and balanced nine more on the running board. His wife plopped on back.
> Mr. Liu's livelihood is now just as precariously balanced. He reckons his cooking-oil costs shot up 27% in 2010… (omitted)
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> In recent weeks, Beijing has moved to snuff out rumors that cooking oil is in short supply by auctioning millions of metric tons from strategic national reserves in Xinjiang and Shandong. The national planning agency has declared that supply 'is completely guaranteed.' In

November, China's government ordered the largest producers to cap their retail prices through March. And it quintupled the fine for conspiring to raise prices to 5 million yuan, or $750,000.

For now, the measures appear to have put a lid on edible-oil prices. Yet one midsize producer in Shanghai says they are also discouraging production. The company's general manager, who asked not to be identified, said he would normally be maximizing output ahead of the Lunar New Year in early February but has deactivated half his plant.

His warehouse is chockablock with 20,000 boxes of unsold oil he values at around $600,000. The production date on some of it is Nov. 23, around the time price controls were imposed and a large grocery distributor halved its order. The manager says talk in the industry is that prices will resume their climb around March… (omitted)

Cooking oil is a rising concern of food vendor Mr. Liu and his wife, whose $105 daily sales from their tiny Shanghai stall go to support their two children who live back in their home province of Shandong. Despite the higher price for soybean oil, Mr. Liu shudders at the risk he faces in lifting his 10.5-cent charge for a flaky sweet bun. 'Customers would disappear,' he says.

Answer the following questions:

1. (8%) How do the following costs of Mr. Liu’s tiny breakfast stand change as the price of cooking oil surge: Fixed cost, variable cost, average total cost, and marginal cost?
2. (4%) Draw a graph to illustrate the demand curve and marginal revenue curve Mr. Liu’s breakfast stand is facing.
3. (4%) How does Mr. Liu’s price and quantity change in response to this price surge of cooking oil? (Here, first assume that only Mr. Liu faces this price surge.)
4. (4%) Suppose the price surge of cooking oil is permanent and felt throughout the breakfast market. How does the market equilibrium price and quantity change?
5. (5%) What is the reaction of the government to this price surge? Do you think its regulatory measures are effective? Why or why not?

B. (25%) Consider the following newspaper

Excerpt from “Publishers propose legislation to prevent heavy discounting (新書不能折扣太多出版商促立法)” from United Daily News (聯合報), 7/18/2010

走進書店，「新書七九折」等牌子掛滿牆；上網路書店，大家等著搶購殺到六六折的折扣書…圖書發行協進會與獨立書店聯盟等出版業者，正研擬推動限制新書折扣的「圖書統一定價制」，希望遏止折扣戰的惡風。

Banners that say "New arrivals 21% off!" hang in retail bookstores; People rush to buy discounted books that are 34% off online… The Publisher's Association and the Independent Bookstore Union are proposing uniform price fixing for new books to stop this never-ending price war of discounting…

Answer the following questions:

1. (6%) Which market analyzed above best resembles this market? How would your answer above apply?
2. (4%) Explain why a private agreement among publishers to stop discounting new books are likely not possible to sustain.
3. (5%) Does the fragility of private agreements increase or decrease social welfare? Explain.
4. (5%) Should lawmakers regulate this kind of producer's behavior? Why or why not?
5. (5%) Is your answer to the previous question the same as that for "retail price maintenance"? Why or why not?

C. (25%): Economics in the News – Male vs. Female T-Shirts for National Public Radio

Excerpts from "Our Industry Follows Poverty': Success Threatens A T-Shirt Business", by MARIANNE MCCUNE December 02, 2013 (All Things Considered, NPR)

The Planet Money men's T-shirt was made in Bangladesh, by workers who make about $3 a day, with overtime. The Planet Money women's T-shirt was made in Colombia, by workers who make roughly $13 a day, without overtime.

The wages in both places are remarkably low by U.S. standards. But the gap between them is huge. Workers in Colombia make more than four times what their counterparts make in Bangladesh... (omitted)

The workers in both places are doing essentially the same thing: sewing T-shirts together. So why the big difference in their wages?

With a long tradition of apparel manufacturing and better technology, the Colombians can make T-shirts much, much faster than the Bangladeshis can. In Bangladesh, on one sewing line for our T-shirt, 32 people can make about 80 shirts per hour. One sewing line in Colombia has eight people and can make about 140 T-shirts per hour. The two lines aren't perfectly parallel — the Bangladeshi workers are completing a few more details of the shirt than the Colombians are. But the difference is striking nevertheless… (omitted) …Crystal, the Colombian company that made the women's shirts, does everything… (omitted) …Jockey, the company that coordinated the production of our T-shirt.

Colombia's economy has been growing like crazy for the past decade, and wages have been rising. That's good for the country as a whole, but it may wind up driving away the T-shirt industry.

"There is a saying that is going to sound horrible," Crystal's CEO, Luis Restrepo, told me. "Our industry follows poverty." It's an industry "on roller skates," he said, rolling from Latin America to China, to Bangladesh — wherever costs are lowest… (omitted)

But the growth of Colombia's economy means it's getting expensive to make simple products like T-shirts there. "Wages continue to go up, costs continue to go up," Smith said. Jockey plans to move production to several other countries, where its cost per shirt will be 20 to 30 percent lower, according to Smith.

The loss of Jockey will be a blow to Crystal. But as Colombia's economy has grown, Crystal has been transforming itself from a manufacturer of low-end clothes into a company that sells higher-end clothes under its own brands. The company has already opened 160 of its own stores across Latin America, and has plans for more.
"We decided we want to control our own destiny," Restrepo said.

Answer the following questions:

1. (5%) Assume Jockey is the only company that supplies Planet Money T-shirts to NPR, and it can buy as many shirts at the same cost-per-shirt stated above. Draw a diagram to analyze how Jockey determines the price and quantity when selling to NPR audience (to maximize profit).
2. (5%) What is the marginal product of labor for Bangladesh workers (in terms of T-shirt per hour)? What is the marginal product of labor for Colombian workers? How many times is the difference in productivity?
3. (4%) How many times is the Colombian workers paid (per day) compared to Bangladesh workers? Is this justified by the difference in productivity?
4. (5%) Assume Crystal is a price-taker in both the T-shirt market and the Colombian labor market, and Colombian workers work eight hours a day (without overtime). What is the "cost-per-shirt" that Jockey pays?
5. (6%) Assume the Bangladesh T-shirt firm is a price-taker in both the T-shirt market and the Bangladesh labor market. How many hours does Bangladesh workers need to work overtime (to make up the productivity difference)?