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Practice Midterm 2 – Answer Key
Econ 160, Fall 2015, CSUN, Prof. Axarlian
(100 points)

Multiple Choice Questions (4 points each): Choose the best answer given.

1) The table shows the benefits and costs per hour of Tom's bicycle delivery service in New York City.

Quantity	Marginal Benefit	Marginal Cost
0		
	$9	$2
1		
	7	1
2		
	5	2
3		
	3	2
4		
	1	5
5		

The optimal quantity of hours for Tom to work is:

A) 1

B) 3

C) 4

D) 5

Answer: C

2) The relationship between the quantity of inputs a firm uses and the quantity of output it produces is the:

A) production function.

B) utility function.

C) demand function.

D) supply curve.

Answer: A

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3) The marginal utility per dollar spent on a good is the:

A) total utility of the good divided by its price

B) the total utility of the good times its price

C) additional utility gained by spending one more dollar on that good or service

D) the price of the good divided by its marginal utility

Answer: C

4) Economic profit for a business is:

A) the firm's revenue minus the opportunity cost of all resources used

B) the firm's revenue minus its capital assets

C) always greater than its accounting profit

D) the firm's revenue minus its explicit costs

Answer: A

5) Utility is measured in hypothetical units called:

A) utils.

B) surplus cells.

C) bundles.

D) marginals.

Answer: A

6) The change in total cost when one more unit is produced is:

A) marginal cost.

B) average total cost..

C) average variable cost.

D) total cost.

Answer: A

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7) A firm's profit is equal to:

A) marginal revenue minus marginal cost.

B) total revenue minus total cost.

C) price minus marginal cost.

D) price minus variable cost.

Answer: B

8) The discipline that combines economic modeling with insights from human psychology is known as:

A) irrational economics

B) rational economics

C) status quo economics

D) behavioral economics.

Answer: D

9) A perfectly competitive firm will shut down when:

A) price < marginal revenue.

B) price < average variable cost.

C) price < average total cost.

D) price < demand.

Answer: B

10) When marginal utility is zero, total utility is::

A) at a maximum.

B) at a minimum.

C) zero.

D) negative

Answer: A

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11) Marginal cost is:

A) total cost divided by output..

B) fixed cost divided by output.

C) the change in total cost divided by the change in output.

D) variable cost divided by output.

Answer: C

12) The marginal utility per dollar spent on a good is the:

A) the total utility of the good times its price.

B) additional utility gained by spending one more dollar on that good or service.

C) the price of the good divided by its marginal utility.

D) total utility of the good divided by its price.

Answer: B

13) The curve showing the relationship between the price of a good and the total output of the industry as a whole is known as the:

A) marginal revenue curve.

B) industry supply curve.

C) production function.

D) production possibilities frontier.

Answer: B

14) The short run is a time period:

A) of a few days.

B) of more than 1 year.

C) at least 1 month but less than 1 year.

D) in which the quantity of at least one input is fixed.

Answer: D

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15) Jack owns a bicycle shop where he sells and repairs bicycles. His revenue is $400,000 per year. His shop is in a building that he owns and could rent for $20,000 per year. He has an assistant to whom he pays a $30,000 salary each year. He paid $100,000 to purchase the inventory of bicycles he sells. He pays a total of $50,000 in taxes, insurance, and utilities each year. In order to operate his shop, Jack gave up his job as a CPA, where he earned $100,000 per year. Jack's accounting profit is:

A) $220,000

B) $280,000

C) $300,000

D) $500,000

Answer: A

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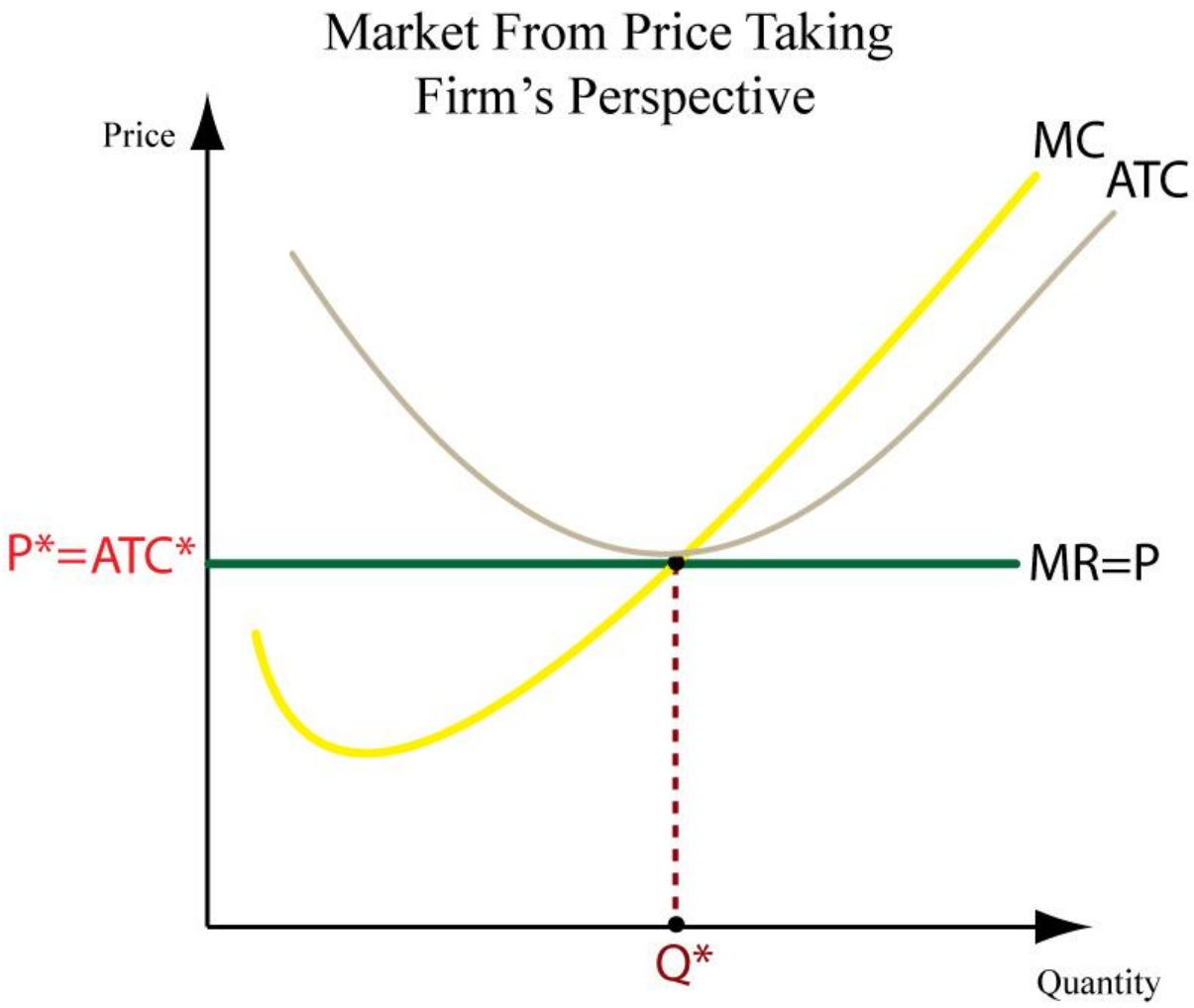
Short Answer Questions (40 points)

1) (10 points) Draw and label a graph to depict a perfectly competitive firm in long run equilibrium. What is the amount of economic profits? Where is the profit maximizing output? Label the marginal revenue, the price charged and the average total cost (ATC) of the output. Show and indicate everything clearly in your graph.



In the long run economic profit is equal to 0. (1 point)
The profit maximizing level of output is Q* (1 point)
(1 point) for the perfectly elastic demand curve
(1 point) for labeling the perfectly elastic demand as the price
(1 point) for labeling MR=P
(1 point) for labeling ATC=P
(1 point) for correctly drawing and labeling the MC curve
(1 point) for correctly drawing and labeling the ATC curve
(1 point) for drawing Q* at the point where MC=MR
(1 point) for the ATC curve's minimum being the point where MC crosses it

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2. (10 points) You own and operate a bike store. Each year, you receive revenue of $200,000 from your bike sales, and it costs you $100,000 to obtain the bikes. In addition, you pay $20,000 for electricity, taxes, and other expenses per year. Instead of running the bike store, you could become an accountant and receive a yearly salary of $40,000. A large clothing retail chain wants to expand and offers to rent the store from you for $50,000 per year. How do you explain to your friends that despite making a profit, it is too costly for you to continue running your store?

a. (1 point) Define accounting profit

Accounting profit is equal to total revenue minus explicit costs.

b. (3 points) What is your accounting profit?

Revenue		$200,000
Explicit costs	Bikes	$100,000
	Electricity, Taxes, etc.	$20,000
Accounting Profit		$80,000

c. (1 point) Define economic profit

Economic profit equals total revenue minus both explicit and implicit costs (which make up opportunity costs)

d. (4 points) What is your economic profit?

Revenue		$200,000
Explicit costs	Bikes	$100,000
	Electricity, Taxes, etc.	$20,000
Implicit Costs	Forgone Rent	$50,000
	Forgone Salary	$40,000
Economic Profit		-$10,000

e. (1 point) Should you continue running your shop?

Since your economic profit is negative, you would be better not operating the consulting business and teaching economics instead

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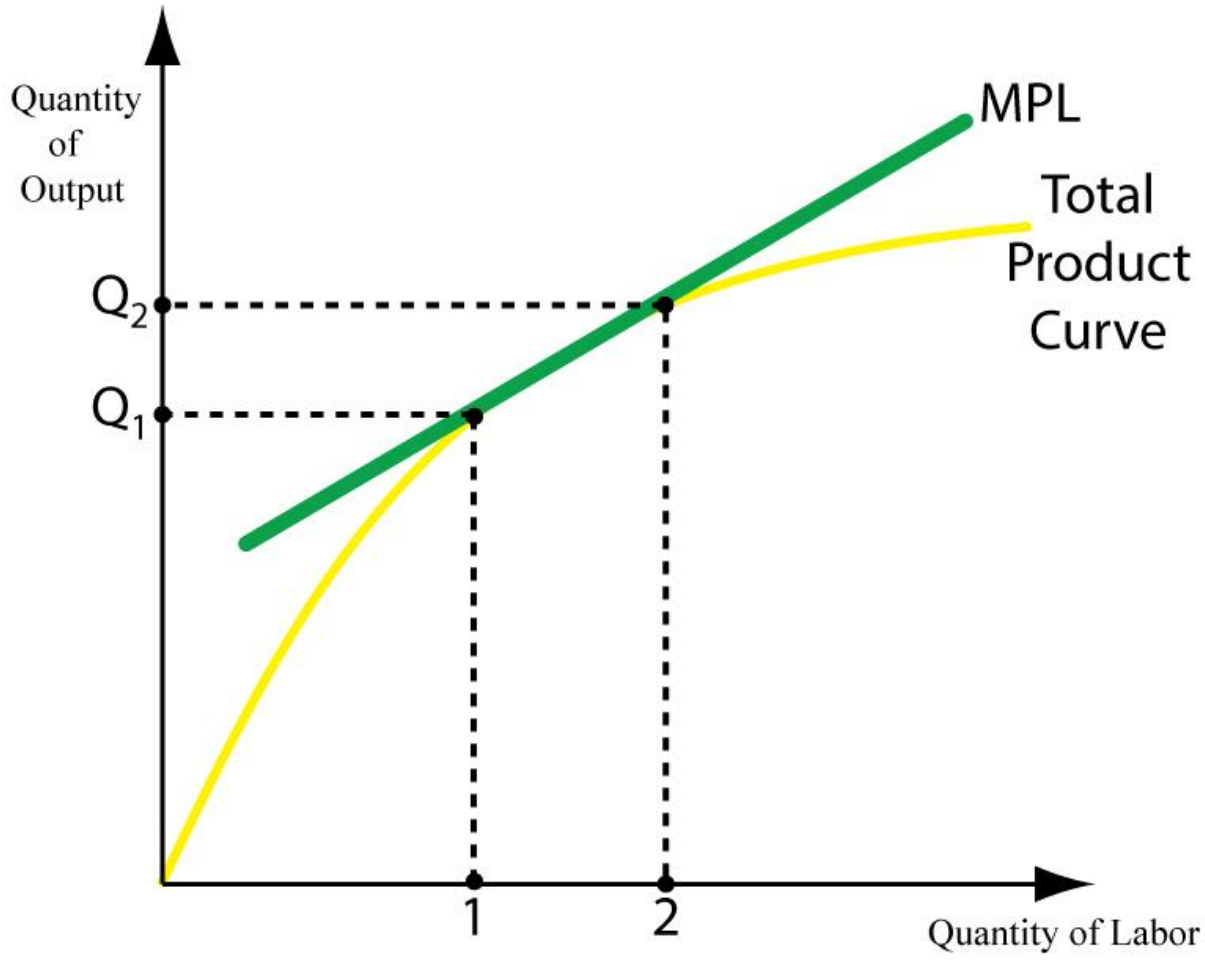
3. (10 points) Draw a total product curve and show the marginal product of labor on the curve. Define the marginal product of labor. Why does the total product curve flatten out as more labor is employed?



(1 point) – labeling the axes
(3 points) – Drawing the total product curve correctly
(2 points) – Correctly identifying the marginal product of labor
The marginal product of labor is the additional output produced from employing one more unit of labor. It is the slope of the total product curve. (2 points)
The total product curve levels out because diminishing returns to labor causes the marginal product to decrease as more labor is employed. (2 points)

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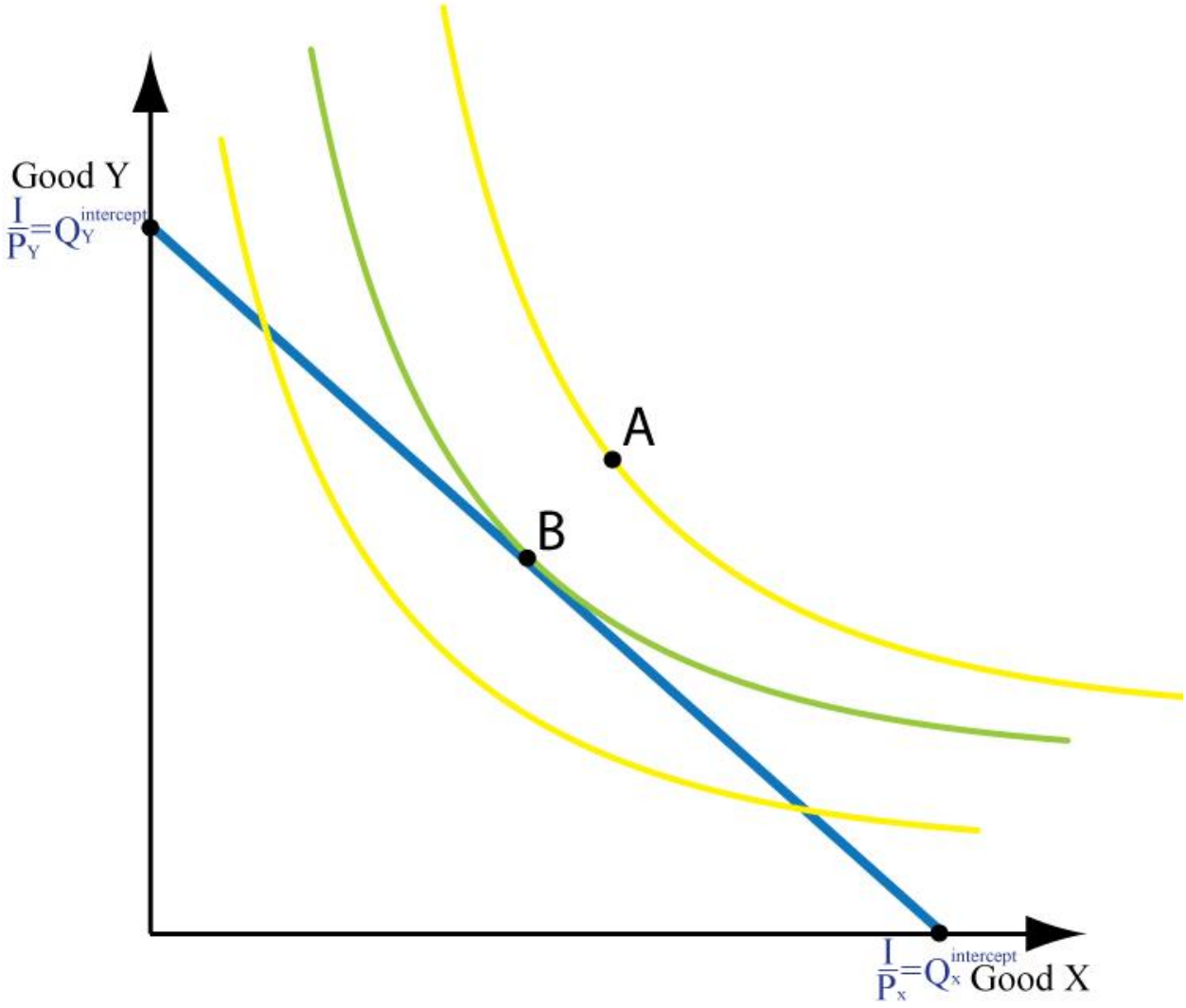
4. (10 points) Using a graph with indifference curves and a budget line, show how a rational consumer makes her choice for a bundle of goods (good x and good y) to maximize her total utility. If the consumer's income is **I**, the price of x is $\mathbf{P_x}$ and the price of y is $\mathbf{P_y}$ label the intercepts using this information. Also, label a point on another indifference curve that is preferred to the optimal point but is not affordable



Point B is the most preferred and affordable consumption bundle. It is tangent to the budget line and lies on the highest possible indifference curve. Point A is preferred to consumption bundle B but it lies outside of the budget constraint.

(1 point) – Labeling the Axes
(1 point) – Labeling the Y-intercept of the budget line
(1 point) – Labeling the X-intercept of the budget line
(1 point) – For drawing the budget line
(1 point) – For drawing at least two indifference curves that have the four properties consistent with preferences for ordinary goods

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(1 point) – For correctly labeling the preferred and unaffordable bundle
(2 points) – For correctly identifying the optimal consumption bundle
(2 points) – Drawing the optimal consumption bundle at the point where the budget constraint is tangent to the highest possible indifference curve