

Date Assigned: Wednesday, 3/9

Date Due: Monday, 3/14

Name: _____

Honor Pledge Signature: _____

Instructions and Rules:

- This is a timed (2 hours), take-home, closed book exam. **You are not allowed to take breaks and must complete the exam in one sitting.**
- This exam has 20 multiple choice questions (50 points), 4 short answer questions (50 points), and 1 extra credit question (5 points). The total number of points possible for this exam is 105.
- You are allowed the use of a calculator but you may not use notes, books, cell phones, or any electronic device. You may not talk with other students or look at exam papers of other students.
- Please record your multiple choice answers on the “Multiple Choice Answers” page. **No credit will be given to students who do not record their answers in the “Multiple Choice Answers” section.** Space has been provided for you to show your work on the short answer question.
- If you believe there is no right answer or more than one right answer to any question, explain your reasoning on the “Appeals” page. **I will not consider an appeal unless you have recorded your argument on the exam sheet during the exam period.**
- When you have finished the review, sign the Honor Code Pledge.

Multiple Choice Answers

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

Appeals

Scratch work

Multiple Choice Questions (50 points)

1: Multiple Choice

The production possibilities frontier illustrates

- (a) the combinations of output that an economy should produce
- (b) the combinations of output that an economy should consume
- (c) the combinations of output that an economy can produce
- (d) all of the above is correct

2: Multiple Choice

Which of the following is a factor that is held constant along a supply curve for orange juice?

- (a) the price of oranges
- (b) the wages of workers who pick oranges
- (c) the price of orange juice
- (d) both a) and b) are held constant

3: Multiple Choice

Soo Jin shares a one-bedroom apartment with her classmate. Her share of the rent is \$700 per month. She is considering moving to a studio apartment which she will not have to share with anyone. The studio apartment rents for \$950 per month. Recently, you ran into Soo Jin on campus and she tells you that she has moved into the studio apartment. Soo Jin is as rational as any other person. As an economics major, you rightly conclude that

- (a) Soo Jin did not have a choice; her roommate was a slob.
- (b) Soo Jin figures that the additional benefit of having her own place (as opposed to sharing) is at least \$250
- (c) Soo Jin figures that the benefit of having her own place (as opposed to sharing) is at least \$950
- (d) the cost of having one's own space outweighs the benefits.

Scratch work

4: Multiple Choice

Why are long-run demand curves likely to be more elastic than short-run demand curves?

- (a) prices tend to rise in the long-run
- (b) consumers prefer the long-run to the short-run
- (c) consumers have more time to adjust their behavior in response to a change in price
- (d) all of the above

5: Multiple Choice

You and your friend Joe have identical tastes. At 2 p.m., you go to the local Ticketmaster outlet and buy a \$30 ticket to a concert in Charlotte. Joe plans to attend the same concert, but plans to buy his ticket at the venue for \$25 (no Ticketmaster surcharge). At 4 p.m., an unexpected ice storm begins, making the drive to Charlotte much less attractive than before (but assuring the availability of good seats). If both you and Joe are rational, is one of you more likely to attend the concert than the other?

- (a) Joe is more likely to go because he has a higher marginal benefit.
- (b) You are more likely to go because you have a lower marginal cost.
- (c) Joe is more likely to go because he has a lower marginal cost.
- (d) You are more likely to go because you have a higher marginal benefit.

6: Multiple Choice

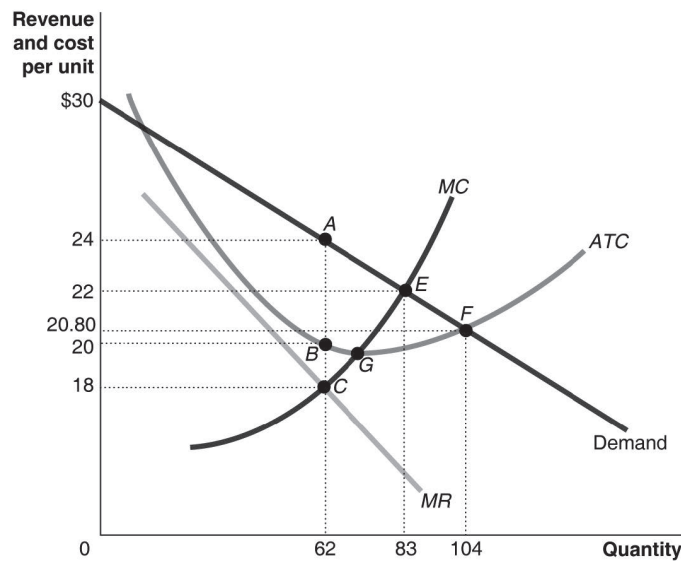
Suppose your expenses for this term are as follows: tuition: \$10,000, room and board: \$6,000, books and other educational supplies: \$1,000. Further, during the term, you can only work part-time and earn \$8,000 instead of your full-time salary of \$20,000. What is the opportunity cost of going to college this term, assuming that your room and board expenses would be the same even if you did not go to college?

- (a) \$11,000
- (b) \$17,000
- (c) \$23,000
- (d) \$29,000

Scratch work

7: Multiple Choice

Figure 1: Cost and Demand Curves for a Monopolist



Refer to Figure 1. Assume the firm maximizes its profits. What is the amount of consumer surplus?

- (a) 21
- (b) 124
- (c) 186
- (d) 332

8: Multiple Choice

Refer to Figure 1 in Question 7. What is the amount of consumer surplus if, instead of monopoly, the industry was organized as a perfectly competitive industry?

- (a) 21
- (b) 124
- (c) 186
- (d) 332

Scratch work

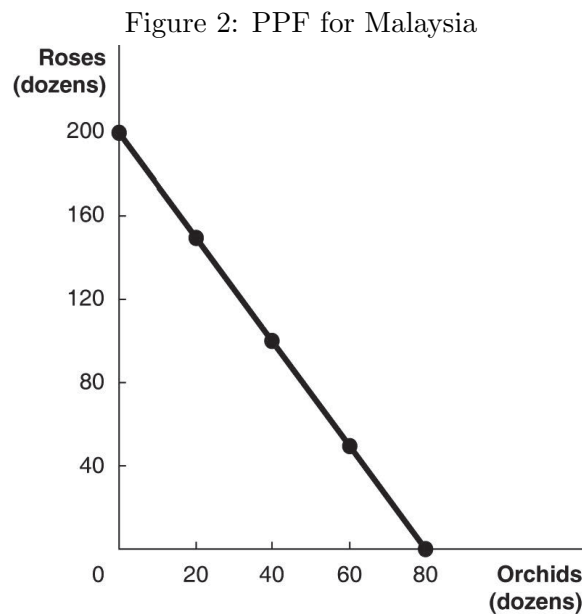
9: Multiple Choice

Refer to Figure 1 in Question 7. If the firm maximizes its profits, the deadweight loss to society due to this monopoly is equal to the area

- (a) ABF
- (b) ABEG
- (c) ACE
- (d) EFG

10: Multiple Choice

The figure below shows the production possibilities frontier for Malaysia, a nation that produces two goods, roses and orchids.



Refer to Figure 2. What is the opportunity cost of 80 dozen orchids?

- (a) 0 roses
- (b) 2.5 dozen roses
- (c) 40 dozen roses
- (d) 200 dozen roses

Scratch work

11: Multiple Choice

Refer to Figure 2 in Question 10. What is the opportunity cost of 100 dozen roses?

- (a) 0.8 dozen orchids
- (b) 5 dozen orchids
- (c) 40 dozen orchids
- (d) 80 dozen orchids

12: Multiple Choice

Refer to Figure 2 in Question 10. If Malaysia chooses to produce 40 dozen orchids, how many roses can it produce to maximize production?

- (a) 30 dozen roses
- (b) 50 dozen roses
- (c) 100 dozen roses
- (d) 150 dozen roses

13: Multiple Choice

Refer to Figure 2 in Question 10. The linear production possibilities frontier in the figure indicates that

- (a) Malaysia has a comparative advantage in the production of orchids
- (b) Malaysia has a comparative disadvantage in the production of roses
- (c) the tradeoff between roses and orchids is constant
- (d) it is progressively more expensive to produce orchids

14: Multiple Choice

Peanut butter and grape jelly are complements. What happens in the peanut butter market when the price of grapes rise?

- (a) the supply curve for peanut butter shifts to the right
- (b) the demand curve for peanut butter shifts to the right
- (c) the price of peanut butter falls
- (d) all of the above

Scratch work

15: Multiple Choice

What would happen to the equilibrium price and quantity of lattes if coffee shops began using a machine that reduced the amount of labor necessary to produce steamed milk (which is used to make lattes) and scientists discovered that coffee prevents heart attacks and informed consumers of their findings?

- (a) Both the equilibrium price and quantity would increase
- (b) Both the equilibrium price and quantity would decrease
- (c) The equilibrium price would increase, and the effect on equilibrium quantity would be ambiguous
- (d) The equilibrium quantity would increase, and the effect on equilibrium price would be ambiguous

16: Multiple Choice

The largest loss a profit maximizing perfectly competitive firm experiences in the short run is equal to

- (a) 0, it never loses money if it maximizes profit
- (b) its variable costs
- (c) its fixed costs
- (d) cannot be determined from the information given

17: Multiple Choice

Suppose Martha has a weekly budget of of \$20 and she only wishes to buy 3 goods: pens, movie tickets and roast beef sandwiches. Suppose that one sandwich costs \$2, a movie ticket costs \$6 and a pen costs \$1. Here is the total utility attached to each of the following purchases:

Table 1: Total Utility for Each Purchase

Quantity	Sandwich	Movie Tickets	Pens
1	50	240	20
2	90	330	35
3	120	390	45
4	140	420	50

Let x be the number of sandwiches, y be the number of movie tickets and z be the number of pens. What is Martha's budget constraint?

- (a) $2x + 6y + z = 20$
- (b) $6x + 2y + 2z = 20$
- (c) $6x + y + 2x = 20$
- (d) $x + 6y + z = 20$

Scratch work

18: Multiple Choice

Refer to Table 1 in Question 17. Which of the following combinations is affordable given Martha's budget?

- (a) 4 sandwiches, 3 movies, 4 pens
- (b) 2 sandwiches, 4 movies, 2 pens
- (c) 4 sandwiches, 1 movie, 4 pens
- (d) 3 sandwiches, 3 movies, 3 pens

19: Multiple Choice

Refer to Table 1 in Question 17. What is the affordable combination that provides Martha with the greatest utility?

- (a) 4 sandwiches, 3 movies, 3 pens
- (b) 3 sandwiches, 2 movies, 2 pens
- (c) 2 sandwiches, 2 movies, 4 pens
- (d) None of the above

20: Multiple Choice

Refer to Table 1 in Question 17. At the optimal and affordable consumption level that maximizes total utility, what is the marginal utility per dollar spent?

- (a) 20
- (b) 10
- (c) 15
- (d) 5

Short Answer Questions (50 points)

1: Short Answer (15 points)

Suppose that Iraq and Iran both produce oil and olive oil, which are sold for the same price in both countries. These are the combinations of the two goods that each country can produce in one day using the same amounts of capital and labor:

Iraq		Iran	
Oil	Olive Oil	Oil	Olive Oil
0	60	0	50
10	45	10	40
20	30	20	30
30	15	30	20
40	0	40	10
		50	0

- (a) Which country has a comparative advantage in producing oil? Which country has a comparative advantage in producing olive oil? (4 points)
- (b) Suppose Iraq is producing 30 tons of oil and 15 tons of olive oil, and Iran is currently producing 10 tons of oil and 40 tons of olive oil. Demonstrate, by providing both the rate of trade and gains from trade, that Iraq and Iran can both be better off if they specialize in producing only one good and trade for the other. (5 points)

- (c) Now, focus on the PPF for Iran. For each of the following, explain whether the PPF curve shifts outward, inward, or remains unchanged:
- (i) average educational attainment of the population increases. (3 points)
 - (ii) an experienced oil-and-gas engineer temporarily employed as an olive picker finds an engineering job in the oil-and-gas industry; an olive picker temporarily working on an oil rig finds a job on an olive farm. (3 points)

2: Short Answer (15 points)

Suppose that the demand for chicken is given by $Q = 30 - P + I$, where I is consumers' income. The supply of chicken is given by $Q = 2P - 4$.

- (a) Is chicken a normal good? Why? (3 points)
- (b) With $I = 20$, what is the equilibrium price and quantity of chicken? (4 points)
- (c) State the Law of Demand. (3 points)

- (d) Now, suppose we have the following data concerning the price and quantity of chicken sold for May and June 2015.

	May	June
Price	\$4.50	\$4.60
Quantity	3 million pounds	3.2 million pounds

Does this data show that the law of demand does not hold for chicken? Explain why or why not. (5 points)

3: Short Answer (10 points)

State whether you agree or disagree with the following bold statements and provide a brief explanation of why. No points will be awarded for answers without explanations. State any assumptions that you make.

- (a) In reality, firms usually do not have identical costs. **As a result, in a perfectly competitive market, different consumers will pay different prices for the same product.** (5 points)
- (b) **Cutting the price of a product never increases the amount of revenue raised. To increase revenue, prices have to be increased.** (5 points)

4: Short Answer (10 points)

Read the following statements carefully and classify them as either **TRUE** or **FALSE**. If **FALSE**, provide a brief explanation of why. State any assumptions that you make.

- (a) If marginal cost is above the average variable cost, then average variable cost is decreasing. (4 points)

- (b) If the marginal product of labor is decreasing, then marginal cost of production must be rising. (3 points)

- (c) If average total cost is falling, then marginal cost must also be falling. (3 points)

Extra Credit Question (5 points)

Extra Credit:

Can the government or firms change consumer tastes and preferences for a good? State the good you are referring to and how the government/firm can change tastes/preferences of consumers participating in the market for the good.