

ECON 201: Introduction to Macroeconomics
Professor Robert Gordon
Midterm Exam 1:
October 17, 2016

NAME _____

Circle the **TA session** you attend:

Bence - 3PM

Bence - 4PM

Cagri - 3PM

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Chris - 3PM

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Directions: This test is in two parts, a multiple choice question part and a short-answer part. Use this answer packet to complete the exam. Calculators are permitted. Books, notes, reference materials, etc. are prohibited. Good luck!

Part 1: Referring to the questions in the Multiple Choice Questions Packet, choose the one alternative that best completes the statement or answers the question. Each question is worth one point. There is no penalty to guessing, so be sure to answer all of them. Write your answers in the following table using capital letters.

1	6	11	16	21	26
2	7	12	17	22	27
3	8	13	18	23	28
4	9	14	19	24	29
5	10	15	20	25	30

Part 1:

1. The opportunity cost of something is:
 - A) greater during periods of rising prices.
 - B) equal to the money cost.
 - C) less during periods of falling prices.
 - D) what is given up to acquire it.

2. Marla will make \$10 by tutoring for an additional hour, but she will lose an hour of studying for her economics test. Marla decides to study rather than tutor. Marla's choice indicates that she:
 - A) values an additional hour of studying more than the \$10 she would earn tutoring.
 - B) values an hour of studying less than the \$10 she would earn tutoring.
 - C) does not understand that there is no benefit from studying.
 - D) doesn't need the money.

3. After swimming 100 laps at the pool, Erik decides to swim 10 more before lifting weights. This statement best represents this economic concept:
 - A) Resources are scarce.
 - B) The real cost of something is what you must give up to get it.
 - C) "How much" is a decision at the margin.
 - D) There are gains from trade.

4. Mr. Freeze operates a fleet of ice cream trucks that drive around neighborhoods selling ice cream. He is trying to decide whether he should buy another ice cream truck to add to his fleet. He determines that one more truck will add \$750 to his revenue but that the truck will also increase his costs by \$1,000. Based on marginal analysis, Mr. Freeze decides:
 - A) that he should not purchase the truck, since the costs outweigh the benefits.
 - B) that he should purchase the truck, since the benefits outweigh the costs.
 - C) that he should purchase the truck, since his profits will rise by \$250.
 - D) to purchase several trucks with the same costs and benefits.

Use the following to answer question 5:

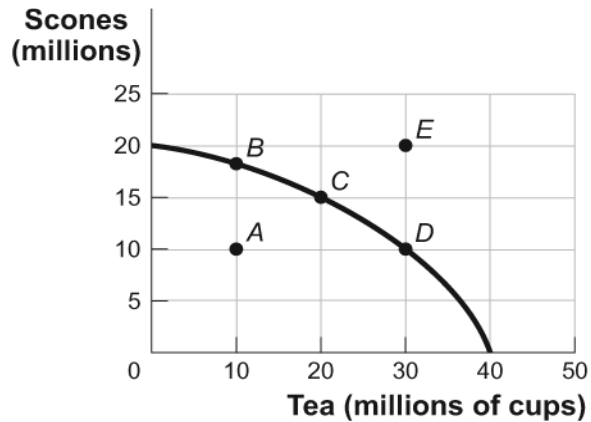
Table: Production Possibilities Schedule I

Alternatives	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>
Consumer goods per period	0	1	2	3	4	5
Capital goods per period	30	28	24	18	10	0

5. (Table: Production Possibilities Schedule I) Look at the table Production Possibilities Schedule I. The opportunity cost of producing the fourth unit of consumer goods is _____ units of capital goods.
 - A) 2
 - B) 4
 - C) 6
 - D) 8

Use the following to answer question 6:

Figure: Production Possibility Frontier Curve for Tealand



6. (Figure: Production Possibility Frontier for Tealand) Look at the figure Production Possibility Frontier for Tealand. Tealand can produce at point *E* only if the government:
- A) eliminates unemployment.
 - B) raises taxes.
 - C) permits more immigration.
 - D) increases the cost of production by decreasing the use of technology.
7. Which of the following is not a problem in today's economy compared to 2007, the last year before the financial crisis?
- A) Decline in labor-force participation rate
 - B) Increase of involuntary part-time employment
 - C) Increase of the unemployment rate
 - D) Wage stagnation
8. A lawyer can type faster than her secretary but should not do her own typing and fire the secretary. This is an example of
- A) The invisible hand
 - B) Comparative advantage
 - C) Absolute advantage
 - D) Marginal analysis
9. If they produce only hamburgers, in a single day Sarah can produce 10 hamburgers, and Abe can produce 5 hamburgers. If they make milkshakes only, in a single day Sarah can produce 10 milkshakes, and Abe can produce 4 milkshakes. Therefore, _____ has an absolute advantage and a comparative advantage in making _____.
- A) Sarah; hamburgers
 - B) Sarah; milkshakes
 - C) Abe; hamburgers
 - D) Abe; milkshakes

10. "The rate of unemployment is 9%." This statement:
- A) is positive.
 - B) is normative.
 - C) involves a value judgment.
 - D) is a personal reflection and has no value in economics.
11. In the circular-flow diagram households receive money for _____ in the _____ market.
- A) producing and selling goods and services; product
 - B) selling resources; product
 - C) selling resources; factor
 - D) selling goods and services; factor
12. A positive relationship between swimsuits purchased and ice cream purchased could be the result of:
- A) reverse causality.
 - B) a magnified scale on the swimsuit axis.
 - C) a truncation of the ice cream axis.
 - D) an omitted variable, such as the external temperature.
13. A pie chart is used to depict information about:
- A) the relative shares of categories of data.
 - B) the changes of a particular variable over time.
 - C) positive, not negative, relationships among variables.
 - D) the changes of a particular variable over time and positive relationships.
14. Which of these is an example of a market failure in the private economy that requires government intervention?
- A) Pollution
 - B) Subsidies
 - C) Price floors
 - D) Sales taxes
15. According to a course packet reading, which of the following professions causes the smallest reduction in salary for a woman who re-enters the workforce after taking off 18 months to care for a newborn child?
- A) Management consulting
 - B) Corporate finance
 - C) Law
 - D) Medicine

16. If goods A and Z are complements, an increase in the price of good Z will:
- A) increase the demand for good A.
 - B) decrease the demand for good A.
 - C) decrease the demand for good Z.
 - D) decrease the demand for both good A and good Z.
17. An inferior good is one for which a(n) _____ in buyers' income causes a(n) _____.
- A) increase; increase in demand
 - B) increase; increase in quantity demanded
 - C) increase; decrease in demand
 - D) decrease; decrease in demand

Use the following to answer question 18:

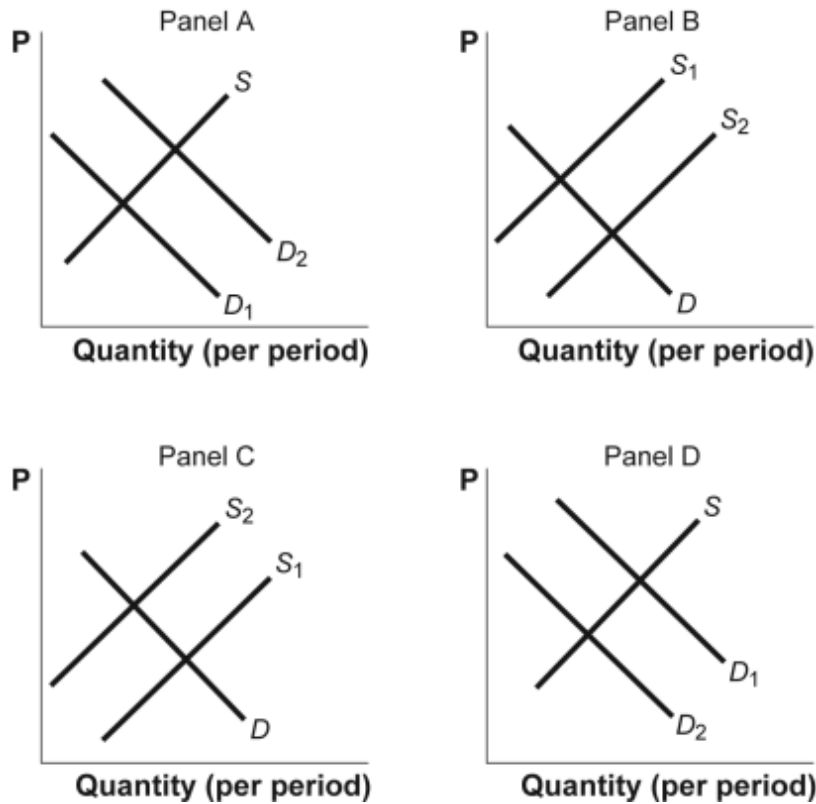
Table: The Market for Chocolate-Covered Peanuts

Price (per bag)	Quantity Demanded (bags per month)	Quantity Supplied (bags per month)
\$0.90	70	280
0.80	105	245
0.70	140	210
0.60	175	175
0.50	210	140
0.40	245	105
0.30	280	70

18. (Table: The Market for Chocolate-Covered Peanuts) Look at the table The Market for Chocolate-Covered Peanuts. A shortage of 210 bags of chocolate-covered peanuts exists if the price is _____ per bag.
- A) \$0.80
 - B) \$0.60
 - C) \$0.40
 - D) \$0.30
19. If the supply and demand curves intersect at \$14, then any price below that would result in:
- A) a shortage.
 - B) a surplus.
 - C) equilibrium.
 - D) an increase in demand.

Use the following to answer question 20:

Figure: Shifts in Demand and Supply III



20. (Figure: Shifts in Demand and Supply III) Look at the figure Shifts in Demand and Supply III. The figure shows how supply and demand might shift in response to specific events. Suppose a wet and sunny year increases the nation's corn crop by 20 percent. Which panel BEST describes how this will affect the market for corn?
- A) panel A
 - B) panel B
 - C) panel C
 - D) panel D
21. For consumers, pizza and hamburgers are substitutes. A rise in the price of a pizza causes _____ in the equilibrium price of a hamburger and _____ in the equilibrium quantity of hamburgers.
- A) a rise; an increase
 - B) a rise; a decrease
 - C) a fall; an increase
 - D) a fall; a decrease

22. A recent news story reported that the Organization of Petroleum Exporting Countries is expected to decrease the supply of oil next summer. Summer is traditionally a time of increased demand for oil because of vacation travel. What would be the combined effect of these two events on the summer market for gasoline?
- A) an increase in the price and the quantity
 - B) an increase in the price and an unpredictable change in the quantity
 - C) an unpredictable change in both the price and the quantity
 - D) an unpredictable change in the price and a decrease in the quantity
23. A sharp increase in the use of tractors in Brazilian agriculture leads to a doubling of the supply of soybeans produced in Brazil. This has the following effects in the U.S.
- A) Shifts the supply curve of corn to the right
 - B) Shifts the supply curve of corn to the left
 - C) Shifts the supply curve of soybeans to the right
 - D) Shifts the supply curve of soybeans to the left
24. A change in tastes reduces the demand for hooded sweatshirts. At the same time production of hooded sweatshirts shifts from China to Vietnam, reducing the cost of production. Which of the following will occur?
- A) Quantity and price both decline
 - B) Quantity increases and price declines
 - C) Quantity decreases, price change uncertain
 - D) Price decreases, quantity change uncertain
25. The NFL wants to give the “common fan” the opportunity to attend the Super Bowl, so it sets Super Bowl prices “low”—tickets for a regular seat at Super Bowl XXXVII cost just \$400. Scalpers, however, sell tickets for \$1,500 or more. If there are no transaction costs to selling a ticket, the true cost of a regular ticket to Super Bowl XXXVII is:
- A) at most \$400.
 - B) at least \$1,500.
 - C) the monetary price paid to obtain the ticket.
 - D) \$1,100 less than the opportunity cost of a ticket.
26. The market for apples is in equilibrium at a price of \$0.50 per pound. If the government imposes a price ceiling in the market at \$0.40 per pound:
- A) quantity demanded will decrease.
 - B) quantity supplied will increase.
 - C) there will be a shortage of the good.
 - D) the price ceiling will not affect the market price or output.

27. West African cotton farmers are very upset about the subsidies the U.S. government pays to American cotton farmers. One reason for this could be that subsidized cotton from the United States:
- A) leads to cotton surpluses in the United States and lower prices for West African farmers on world markets.
 - B) raises the world price of cotton.
 - C) has led to a global shortage of cotton.
 - D) has led to an increase in the demand for West African cotton.
28. When the minimum wage increases:
- A) unemployment among skilled workers decreases.
 - B) fewer workers are willing to work off the books.
 - C) employment of unskilled workers increases.
 - D) unemployment among unskilled workers increases.

Use the following to answer question 29:

Table: Quantity Supplied and Quantity Demanded

Price	Quantity Demanded	Quantity Supplied
\$0	100	25
5	90	40
10	80	55
15	70	70
20	60	85

29. (Table: Quantity Supplied and Quantity Demanded) Look at the table Quantity Supplied and Quantity Demanded. A government-imposed price ceiling equal to \$5 would result in:
- A) the equilibrium quantity being bought and sold in this market.
 - B) excess demand.
 - C) excess supply.
 - D) a surplus occurring in this market.
30. A price ceiling creates
- A) A deadweight loss
 - B) A transfer from producer to consumer
 - C) A transfer from consumer to producer
 - D) A) and B)
 - E) A) and C)

Part 2: Solve the following problems in the provided space. *Show all your work clearly.*

Problem 1 (10 points)

Bob and Dylan are two successful artists who spend all their waking hours writing lyrics and composing music. While their fans have an insatiable appetite for their songs (in case you wonder, songs are made of music and lyrics), they also understand that one can't rush a genius. On a good day, Bob can write 5 lines of lyrics and 5 lines of music. Alternatively, he can write just 2 lines of lyrics which leaves him enough time to finish 8 lines of music. Dylan can write 2 lines of lyrics and 12 lines of music or 8 lines of lyrics and just 3 lines of music.

You can assume that the productions possibility frontiers (PPF) are linear.

1. Draw the PPFs of the two artists. Use separate graphs and put lyrics on the horizontal axis. Make sure to label the intercepts clearly. (4 points)

2. The opportunity cost of writing a line of lyrics in terms of a line of music for Bob is _____, whereas for Dylan it is _____. (2 points)

1; 3/2

3. Bob has a comparative advantage in _____ and an absolute advantage in _____. (2 points)

Lyrics; lyrics

4. Let's flip the perspective. What is Dylan's opportunity cost of composing an extra line of music? (Don't forget to specify the units!) (1 point)

2/3

5. If they both specialize according to their comparative advantage, they can write _____ lines of lyrics and _____ lines of music in total. (1 point)

10; 15

Problem 2 (10 points)

Consider the demand and supply for the Darth Vader figures.

Price	Quantity Demanded	Quantity Supplied
5	11	1
11	9	4
23	5	10

1. What is the demand equation? (2 points)

$$P = 38 - 3Q$$

2. What is the supply equation? (2 points)

$$P = 3 + 2Q$$

3. Calculate the equilibrium price and quantity. (3 points)

$$P = 17; Q = 7$$

4. Government finds the current popularity of Darth Vader dangerous for kids. It wishes to decrease the popularity by imposing a tax on suppliers. It introduces a tax of \$10 per unit sold. What is the new equilibrium price and quantity?

$$P = 23; Q = 5$$

Problem 3 (10 points)

The supply and demand equations for the wheat market are given as:

$$P = 60 + 2Q_s$$

$$P = 210 - 3Q_d$$

1. Calculate the equilibrium price and quantity. (2 points)

P = 120; Q = 30

2. Calculate the consumer surplus, and producer surplus. (2 points)

PS = 900; CS = 1350

3. Government introduces a price floor of \$150 to encourage donations from companies before upcoming elections. Draw a diagram showing producer surplus (PS), consumer surplus (CS), and deadweight loss after the price floor. (3 points)

4. Calculate the producer surplus and deadweight loss. (3 points)

PS = 1400; DWL = 250

Answer Key

1. D
2. A
3. C
4. A
5. D
6. C
7. C
8. B
9. B
10. A
11. C
12. D
13. A
14. A
15. D
16. B
17. C
18. D
19. A
20. B
21. A
22. B
23. A
24. D
25. B
26. C
27. A
28. D
29. B
30. D