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Economics 201

Midterm #1: Questions and Solutions

Exam Solutions: The multiple choice answers are given in boldfaced print and the short answer question answers are given below each question.

Part 1. Multiple Choice Questions (2 points each question)

1. Economic analysis is best designed to answer which question:

- a. why goods and services are so scarce
- b. what are the scarce factors and resources in different countries
- c. why do people have unlimited wants when they buy goods and services
- d. how should scarce goods and services be allocated amongst demanders with unlimited wants**

2. When applied to economic analysis, what does the word "marginal" mean:

- a. marginal means small changes in a specific variable**
- b. marginal means using the average of several values
- c. marginal means we use monetary values in our analysis
- d. marginal means we assume all other variables are equal

3. Which of the following is the best example of what the opportunity cost of enrolling at UofL would be:

- a. the monetary cost of tuition
- b. the amount of income one won't earn now at a full time job
- c. the monetary cost of tuition and the amount of income one won't earn now at a full-time job**
- d. the amount of income one won't earn now at a full-time job and the cost of tuition at schools like UK, where you aren't enrolled
- e. the extra time each student now must spend in studying for exams

4. What is the best description of the term *normative economic analysis*

- a. where one's economic analysis involves making predictions
- b. where one's economic analysis incorporates their own personal opinions**
- c. where one's economic analysis is objective, not subjective
- d. where one's economic analysis involves describing how various curves shift

5. On the production possibilities curve (PPC), points located outside the curve are:

- a. inefficient points
- b. equilibrium points
- c. efficient points
- d. unattainable points**
- e. points associated with unemployment

6. The **best** description of an equilibrium is:
- a. **a point where there is no tendency toward change**
 - b. the point where marginal benefit is greater than marginal cost
 - c. the point where output is always determined in the demand and supply model
 - d. the point where the benefit of the last unit consumed is greatest
 - e. a point where two curves intersect
7. What purpose do economic models serve?
- a. allow for prediction of future events
 - b. allow an analyst to explain how one variable affects another variable
 - c. allow an analyst to explain specific outcomes that have been observed
 - d. allow policymakers to construct policy designed to accomplish specific goals
 - e. **all of the above**

Questions #8-9 refers to the following PPC situation:

The island of Togo can produce either 4 units of shoes or 8 units of bananas. The island of Fiji can produce either 4 units of shoes or 12 units of bananas.

8. Given the information above, which of the following statements is true:
- a. **Togo has a comparative advantage in producing shoes**
 - b. Togo has a comparative advantage in producing bananas
 - c. Togo has the comparative advantage in producing both shoes and bananas
 - d. Fiji has the comparative advantage in producing both shoes and bananas
 - e. neither country has a comparative advantage in producing shoes
9. If an innovation occurs in banana production within Fiji, then what happens?
- a. The innovation will give Fiji a comparative advantage in both goods
 - b. The innovation will give Fiji a comparative advantage in shoe production
 - c. The innovation will cause Fiji to lose any comparative advantage they had before the innovation
 - d. **The innovation will not change Fiji's comparative advantage**
10. If workers migrate from Country X to Country Y, then:
- a. Country Y's output will increase, but Country Y's PPC will not shift
 - b. **Country Y's PPC will increase**
 - c. Country Y's PPC will decrease
 - d. Output in Country Y will move to a point inside Country Y's PPC
 - e. Country Y will relocate to a different point on their PPC
11. Assume that Country X produces two different goods during a period of full employment. Which of the following will make it possible for Country X to produce more of both goods?
- a. Specializing in the production of both goods
 - b. Increase in the demand for both goods
 - c. Increase in the comparative advantage associated with both goods
 - d. **Increase in the number available of laborers within Country X**
 - e. both b and d are correct

12. Assume that Country X experiences a decrease in the utilization of labor without any change in the amount of available labor. Which of the following is the best description of how this change affects the PPC of Country X?

- a. **movement to a point that's on Country X's PPC to a point inside of Country X's PPC**
- b. movement along the PPC of Country X
- c. inward shift of Country X's PPC
- d. outward shift of Country X's PPC
- e. none of the above

Questions #13-14 are taken from the PPC relationship in the table below.

	A	B	C	D	E	F
Quantity of Tractors	0	2	4	6	8	10
Quantity of Automobiles	60	56	48	36	20	0

13. Between pts. C and D, what is the opportunity cost of each automobile?

- a. 2 tractors
- b. 12 automobiles
- c. **1/6 tractor**
- d. 6 tractors
- e. none of the above

14. Between pts. D and E, what is the opportunity cost of each tractor?

- a. 16 automobiles
- b. 2 tractors
- c. 1/8 automobile
- d. **8 automobiles**
- e. none of the above

15. If Michael Jordan is a better basketball player and lecturer than Professor Haworth:

- a. then Michael Jordan's opportunity cost of playing basketball and lecturing is less than that of Professor Haworth
- b. then Michael Jordan would be better off playing basketball and lecturing
- c. then Michael Jordan will have a comparative advantage in both goods
- d. **then Michael Jordan and Professor Haworth may benefit from specialization and trade**

16. What effect would falling production costs have on market for video games?

- a. increase in demand for video games
- b. decrease in demand for video games
- c. **increase in supply of video games**
- d. decrease in supply of video games

17. How would a decrease in the price of lettuce affect the market for salad dressing?

- a. **increase in demand**
- b. decrease in demand
- c. increase in supply
- d. decrease in supply
- e. decrease in demand and decrease in supply

18. How would a decrease in productivity affect the market for salad dressing?

- a. increase in demand
- b. decrease in demand
- c. increase in supply
- d. **decrease in supply**
- e. decrease in demand and decrease in supply

19. *Count Footula* is a foot-fetish video in the pornographic video market (and no, I haven't seen it). If this video has an income elasticity that equals -1.2, then it:

- a. is a normal good
- b. **is an inferior good**
- c. is a luxury
- d. is income elastic
- e. both b and d are correct

20. Assume that the demand for ice cream rises in the Summer and falls in Winter. If a price floor is set at the price that exists in the Summer, then what is the direct effect of this floor in the Winter?

- a. there would be a shortage of ice cream
- b. there would be no direct effect on ice cream
- c. **there would be a surplus of ice cream**
- d. there would be a decrease in demand for ice cream
- e. both c and d will occur

21. How is the market for (movie theater) movies affected by an increase in consumer income?

- a. decrease in the price of movies and an increase in the quantity of movies attended
- b. **increase in the price of movies and an increase in the quantity of movies attended**
- c. increase in the price of movies and a decrease in the quantity of movies attended
- d. decrease in the price of movies and a decrease in the quantity of movies attended
- e. no change in the price of movies, but an increase in the quantity of movies attended

22. Which of the following is a true statement about "price":

- a. price serves as an incentive to sellers
- b. price represents a constraint to buyers
- c. price is a means of assigning value to a good or service
- d. **all of the above**

23. The positive relationship between price and quantity supplied is evidence of:

- a. **the law of supply**
- b. the law of demand
- c. the law of increasing costs
- d. the law of nature

24. Suppose Ford and the United Auto Workers sign a new wage contract where Ford pays less of the workers' health care costs. How would this change affect the market for new cars?

- a. increase in the demand for new cars
- b. decrease in the supply of new cars
- c. **increase in the supply of new cars**
- d. decrease in the demand for new cars

25. What is the direct effect of placing a price ceiling above the equilibrium price?

- a. quantity demanded is greater than quantity supplied
- b. **quantity demanded is equal to quantity supplied**
- c. quantity supplied is greater than quantity demanded
- d. the equilibrium price will increase
- e. demand will increase

26. If a change in licensing costs lowers the cost of starting a business, then how is the market for good X most likely going to be affected?

- a. **decrease in the price of good X and an increase in the number of units sold**
- b. decrease in the price of good X and a decrease in the number of units sold
- c. increase in the price of good X and an increase in the number of units sold
- d. increase in the price of good X and a decrease in the number of units sold
- e. no change in the price of good X and an increase in the number of units sold

27. Assume that regular technological change is the only thing to affect market Z over a period of 10 years. What effect would a price ceiling have in this market over that 10 year period?

- a. increase in demand over time
- b. no change in the shortage that existed at the beginning of the period
- c. **a smaller shortage over time**
- d. a worsening shortage over time

28. If good B's own price elasticity of demand is -0.96 , then good B is a(n):

- a. complement
- b. substitute
- c. normal good
- d. inferior good
- e. **inelastic good**

29. Which of the following is always a true statement:

- a. an inelastic good is also an inferior good
- b. a normal good is also a luxury good
- c. a luxury is also a normal good**
- d. an elastic good is also a luxury good
- e. all of the above

30. What does a positive cross price elasticity imply:

- a. two goods are complements
- b. two goods are substitutes**
- c. a good is a normal good
- d. a good is an inferior good
- e. a good is an inelastic good

The following information about Good X corresponds with Questions #31-33.

Assume you have the following information about goods X and Y, and that this information allows you to determine various measures of elasticity.

- if the price of good X increases by 5%, then 4% less of good X is sold
- if the price of good Y increases by 5%, then 3% less of good X is sold
- if the price of good Y increases by 5%, then 10% less of good Y is sold
- if the income of consumers increases by 5%, then 2% less of good X is sold

31. What is the cross price elasticity these goods:

- a. -1.25
- b. -0.8
- c. -2.0
- d. -1.7
- e. -0.6**

32. The (own) price elasticity of good Y tells us which of the following about good Y:

- a. good Y is inelastic
- b. good Y is elastic**
- c. good Y is a normal good
- d. good Y is an inferior good
- e. not enough information given to provide an answer

33. How does a decrease in consumer income affect the market for good X?

- a. decrease in price and a decrease in quantity
- b. decrease in price and an increase in quantity
- c. increase in price and a decrease in quantity
- d. increase in price and an increase in quantity**
- e. no change in price and a decrease in quantity

34. A per unit (commodity) tax is placed on beef and chicken suppliers. If the demand curve for beef is more elastic than the demand curve for chicken, then:

- a. the consumer burden for chicken will be less than the consumer burden for beef
- b. the consumer burden for chicken will be greater than the consumer burden for beef**
- c. the consumer burden for chicken will be greater than the producer burden for chicken
- d. the consumer burden for beef will be greater than the producer burden for beef
- e. consumers of chicken will bear the entire burden of their tax

35. Assume that the demand curve for good X is horizontal and that the supply curve for good X has a positive slope. When a per unit tax is placed on the suppliers of good X, then:

- a. suppliers will bear the entire burden of the tax**
- b. consumers will bear the entire burden of the tax
- c. consumers and suppliers will have an equal burden with this tax
- d. consumers will bear a greater burden from the tax than suppliers

36. What impact does an increase in the availability of substitutes have on a market?

- a. the market demand curve will be more elastic**
- b. the market demand curve will become steeper
- c. there will be an increase in both the price and quantity
- d. there will be an increase in price and a decrease in quantity
- e. there will be a surplus within this market

37. Consumer surplus is

- a. the difference between the quantity demanded and quantity supplied at the maximum price consumers are willing to pay
- b. for all units sold, the market price minus what the consumer is willing to pay
- c. the difference between what a consumer is willing to pay and what consumer does pay for all units sold**
- d. the excess units left unsold when the market price is greater than a consumer's maximum price
- e. the difference between what a consumer is willing to pay and the lowest price a supplier will accept for all units sold

38. If there is an increase in the cost of producing a good, how is the market for that good affected?

- a. no change in consumer surplus and decrease in producer surplus
- b. increase in consumer surplus and decrease in producer surplus
- c. decrease in consumer surplus and increase in producer surplus
- d. increase in both consumer and producer surplus
- e. decrease in both consumer and producer surplus**

39. Consumer equilibrium is best defined as a situation where which of the following occurs:

- a. the consumer is able to save at least some of their income
- b. the consumer's income is equal to their expenditure
- c. the satisfaction from the last unit purchased is equal to the good's price**
- d. the total satisfaction from a basket of goods purchased is equal to the overall expenditure on that basket of goods
- e. the consumer's maximum price is greater than the cost of buying the good

40. Producer surplus measures

a. the difference between what a consumer is willing to pay and the market price

b. the net benefit to sellers from participating in the market

c. the difference between what a consumer is willing to pay and the lowest price a seller will accept for that good

d. the excess units left unsold by having a market price that's greater than what consumers are willing to pay

e. none of the above

Part II. Short Answer Questions (20 pts overall)

In answering the question below, if a calculation is required, then you must show any relevant work or make it very clear as to how you arrived at your answer. Just providing an answer without supporting work or any explanation will not allow you to get any credit for your answer.

[4 pts] 1. Country A can produce 100 units of corn or 200 units of shoes. Country B can produce 200 units of corn and 400 units of shoes. Who has the comparative advantage in producing shoes, and which country has the comparative advantage in producing corn?

If we calculate the opportunity cost of producing each good in each country, we have the following.

- The opportunity cost in A of producing corn is 2 units of shoes (i.e. $200/100$)
- The opportunity cost in B of producing corn is 2 units of shoes (i.e. $400/200$)
- The opportunity cost in A of producing shoes is a $1/2$ unit of shoes (i.e. $100/200$)
- The opportunity cost in B of producing shoes is a $1/2$ unit of shoes (i.e. $200/400$)

Neither country has a comparative advantage in corn or shoes.

Part II. Short Answer Questions cont.

For full credit on questions #2 and 3, you must show all relevant work or make it exceedingly clear how you got your answer (no work, no credit). Note also that partial credit is possible.

Questions #2 and 3 use the following information:

The demand and supply curves below describe the U.S. market for sequined, white Elvis shirts.

$$\text{Demand: } P = 100 - 2Q_d$$

$$\text{Supply: } P = 20 + 8Q_s$$

(where P = price, Q_d = quantity demanded and Q_s = quantity supplied)

[4 pts] 2. *What is the equilibrium price and quantity for Elvis shirts in the U.S.?*

Set Demand equal to Supply:

$$100 - 2Q = 20 + 8Q$$

Solve for Q^* :

$$Q^* = 8$$

Plug Q^* into Demand or Supply, and solve for P^*

$$P = 100 - 2(8) = \$84$$

[4 pts] 3. *What is the direct effect of a \$60 price ceiling that's placed on this market? If the ceiling leads to a surplus or shortage, then show the amount of that surplus or shortage.*

Since the price ceiling is set below the equilibrium price of \$84, the direct effect will be a shortage.

When producers must charge the price ceiling price of \$60, then we can determine their output (quantity supplied) by looking at the supply curve.

To find Q_s , set the Supply equation equal to \$60 and solve for Q_s :

$$\$60 = 20 + 8Q_s$$

$$Q_s = 5$$

To find out how much people want to buy at a price of \$60, set the Demand equation equal to \$60 also, and solve for Q_d :

$$\$60 = 100 - 2Q_d$$

$$Q_d = 20$$

Any shortage is measured as the difference between quantity demanded and quantity supplied:

$$Q_d - Q_s = 20 - 5$$

$$Q_d - Q_s = 15$$

Part II. Short Answer Questions cont.

Use the following stock information from the Wall Street Journal to answer Question #4. We can assume that the equilibrium price is represented as the final price of the day (Close) and equilibrium quantity is the volume of units sold (Vol (100s)) by the end of the day.

July 15

Stock	Vol (100s)	Hi	Lo	Close	Net Chg
IBM	22686	120 5/8	119	119 5/8	+ 1/4
PepsiCo	94040	41 1/16	38 3/4	39 1/4	-2 3/16
Coca Cola Ent	1686	40 1/2	39 3/4	40 1/2	+7/16
Gen Motors	23161	70 7/8	69 1/4	69 5/8	+ 3/4

July 16

Stock	Vol (100s)	Hi	Lo	Close	Net Chg
IBM	25578	120	117	117	-2 5/8
PepsiCo	83314	39 7/8	38	38 1/8	-1 1/8
Coca Cola Ent	4470	40 13/16	40 1/4	40 3/4	+1/4
Gen Motors	22841	70 5/16	68 1/2	69 3/16	+3/16

4. Based on the day to day changes in the equilibrium within the market for each stock, explain what must have happened to the demand and/or supply curves within each of these markets.

[2 pts] a. IBM

Increase in supply

[2 pts] b. PepsiCo

Decrease in demand

[2 pts] c. Coca Cola Ent.

Increase in demand

[2 pts] d. Gen Motors

Decrease in demand