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Economics 201

Midterm #1

Note that on the last page of this exam, there are equations provided (as discussed in class).

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 an analytical assumption:
 - a. where we assume that a country produces only 2 goods, rather than many different goods
 - b. where we assume that consumers make decisions based on how to maximize their own net benefit
 - c. where we assume that when determining whether the relationship between 2 variables is positive or negative, we hold all other variables constant
 - d. where we assume that firms make choices based on how to best maximize their profit
 - e. where we assume that government should make decisions based on how to maximize the benefit of society

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

Questions #6-10 relate to two countries, Togo and Fiji. Assume that Togo can produce either 4 units of shoes or 8 units of bananas and that Fiji can produce either 4 units of shoes or 12 units of bananas.

6. 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 either good

7. If technological change occurs in banana production within Togo, then what happens?
 - a. this change will increase the opportunity cost of producing bananas and decrease the opportunity cost of producing shoes
 - b. this change will decrease the opportunity cost of producing bananas and decrease the opportunity cost of producing shoes
 - c. this change will increase the opportunity cost of producing bananas and increase the opportunity cost of producing shoes
 - d. this change will decrease the opportunity cost of producing bananas and have no effect on the opportunity cost of producing shoes
 - e. this change will decrease the opportunity cost of producing bananas and increase the opportunity cost of producing shoes

8. If workers migrate from Togo to Fiji, then:
 - a. Fiji's PPC will decrease
 - b. Fiji's PPC will increase
 - c. Fiji's PPC will not shift, but Fiji will move from a point on their PPC to a point inside their PPC
 - d. Fiji's PPC will not shift, but Fiji will move from a point inside their PPC to a point on their PPC
 - e. Fiji's PPC will not shift, but Fiji will move between two points along their PPC

9. If a natural disaster destroys half of the existing capital within Fiji, then:
 - a. Fiji's PPC will decrease
 - b. Fiji's PPC will increase
 - c. Fiji's PPC will not shift, but Fiji will move from a point on their PPC to a point inside their PPC
 - d. Fiji's PPC will not shift, but Fiji will move from a point inside their PPC to a point on their PPC
 - e. Fiji's PPC will not shift, but Fiji will move between two points along their PPC

10. If there is an increase in the productivity of producing shoes within Fiji, then::
 - a. Fiji's PPC will decrease for shoes (only)
 - b. Fiji's PPC will increase for shoes (only)
 - c. Fiji's PPC will increase for both goods
 - d. Fiji's PPC will not shift, but Fiji will move from a point on their PPC to a point inside their PPC
 - e. Fiji's PPC will not shift, but Fiji will move from a point inside their PPC to a point on their PPC

Questions #11-12 relate to the country of Ghana, which we'll assume produces gold and cocoa beans. Given the event in each question below, predict how each event will affect the PPC of Ghana.

11. There is an increase in the demand for gold within Ghana during a period of full employment.
 - a. this event causes no shift, but Ghana will move between 2 points along their PPC
 - b. this event causes no shift, but Ghana will move from a point inside their PPC to a point on their PPC
 - c. this event causes no shift, but Ghana will move from a point on their PPC to a point inside their PPC
 - d. increase in Ghana's PPC for both goods
 - e. increase in Ghana's PPC for (only) gold

12. Ghana experiences an increase in unemployment within the gold sector of their economy.
 - a. this event causes no shift, but Ghana will move between 2 points along their PPC
 - b. this event causes no shift, but Ghana will move from a point inside their PPC to a point on their PPC
 - c. this event causes no shift, but Ghana will move from a point on their PPC to a point inside their PPC
 - d. decrease in Ghana's PPC for both goods
 - e. decrease in Ghana's PPC for (only) gold

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. As this economy moves from producing at pt D to pt C, what is the opportunity cost of producing each additional automobile?
 - a. 2 tractors
 - b. 12 automobiles
 - c. 1/6 tractor
 - d. 6 tractors
 - e. none of the above

14. As this economy moves from producing at pt D to pt E, what is the opportunity cost of producing each additional tractor?
 - a. 16 automobiles
 - b. 2 tractors
 - c. 1/8 automobile
 - d. 8 automobiles
 - e. none of the above

15. How does the Law of Comparative Advantage make 2 countries better off:
 - a. the Law of Comparative Advantage leads to an outward shift in the PPC of each country
 - b. the Law of Comparative Advantage allows both countries to produce more of both goods
 - c. the Law of Comparative Advantage increases the consumption possibilities of both countries
 - d. the Law of Comparative Advantage allows countries to experience lower rates of unemployment
 - e. all of the above

16. 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

17. What effect would an increase in distribution costs have on market for video games?

- a. increase in supply of video games
- b. decrease in supply of video games
- c. increase in demand for video games
- d. decrease in demand for video games
- e. decrease in both demand and supply of video games

18. How would a large decrease in the expected future profit associated with selling handguns affect this market?

- a. increase in supply of handguns
- b. decrease in supply of handguns
- c. increase in demand for handguns
- d. decrease in demand for handguns
- e. decrease in both demand and supply of handguns

19. How would an increase in the price of substitutes for shoes affect the market for shoes?

- a. increase in supply of shoes
- b. decrease in supply of shoes
- c. increase in demand for shoes
- d. decrease in demand for shoes
- e. decrease in demand and decrease in supply of shoes

20. 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 supply of new cars
- b. decrease in supply of new cars
- c. increase in demand for new cars
- d. decrease in demand for new cars
- e. decrease in demand and decrease in supply of new cars

21. How is the market for video streaming services affected by an increase in the local population?

- a. decrease in the equilibrium price and an increase in the equilibrium quantity
- b. decrease in the equilibrium price and a decrease in the equilibrium quantity
- c. increase in the equilibrium price and an increase in the equilibrium quantity
- d. increase in the equilibrium price and a decrease in the equilibrium quantity

22. If a change in regulation makes it easier for someone to become a lawyer, then how will the market for lawyers most likely be affected?

- a. decrease in the equilibrium price and an increase in the equilibrium quantity
- b. decrease in the equilibrium price and a decrease in the equilibrium quantity
- c. increase in the equilibrium price and an increase in the equilibrium quantity
- d. increase in the equilibrium price and a decrease in the equilibrium quantity

23. Assume that local government places a price control on ice cream during the Summer, and that this price ceiling is set below the equilibrium price. What is the direct effect of this price ceiling?

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

24. What is the direct effect of placing a price floor below the equilibrium price?

- a. quantity demanded is equal to quantity supplied
- b. quantity demanded is greater than quantity supplied
- c. quantity demanded is less than quantity supplied
- d. supply will decrease
- e. supply will increase

25. Assume that the current price of gasoline is \$3 per gallon, and that local government places a \$1 price ceiling on gasoline. Based on our discussion from class, what is a possible indirect effect from this price ceiling?

- a. there will be a shortage of gasoline
- b. there will be a surplus of gasoline
- c. there will be an increase in gasoline demanders into this market
- d. there will be an exit of gasoline suppliers from this market
- e. there will be an increase in the demand for gasoline

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

- a. normal good
- b. inferior good
- c. necessity good
- d. elastic good
- e. inelastic good

27. 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

28. What does a positive cross price elasticity tells us about good X and good Y:

- a. good X and good Y are complements
- b. good X and good Y are substitutes
- c. good X and good Y are elastic goods
- d. good X and good Y are normal goods
- e. none of the above

The following information about Good H and good J should be used to answer Questions #29-31. Assume you have the following information about goods H and J, and that this information allows you to determine various measures of elasticity.

- if the price of good H increases by 5%, then 4% less of good H is sold
- if the price of good J increases by 5%, then 2% less of good J is sold
- if the price of good H increases by 10%, then 2% more of good J is sold
- if the income of consumers increases by 5%, then 2% less of good H is sold
- if the income of consumers increases by 8%, then 2% more of good J is sold

29. What is the cross price elasticity good H and good J:

- a. 0.8
- b. 2.0
- c. 1.5
- d. 0.2
- e. none of the above

30. Based on the information above, which of the following is a correct statement about good H?

- a. good H is inelastic
- b. good H is a complement with good J
- c. good H is a normal good
- d. good H is a necessity
- e. good H is a luxury

31. How does an increase in consumer income affect the market for good H?

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

32. 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

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

- a. the market demand curve will become flatter
- 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

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

- a. increase in equilibrium price, but no change in consumer surplus
- b. decrease in equilibrium price, and an increase in consumer surplus
- c. increase in equilibrium price, and a decrease in consumer surplus
- d. decrease in equilibrium price, and a decrease in consumer surplus
- e. increase in equilibrium price, and an increase in consumer surplus

35. 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

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.

[8 pts] 1. Uzbekistan and Khazakstan both produce cotton and oil, which we'll assume corresponds with the PPC tables below.

Uzbekistan	A₁	A₂	A₃	A₄	A₅	A₆	A₇
Cotton	0	4	8	12	16	20	24
Oil	18	15	12	9	6	3	0

Khazakstan	B₁	B₂	B₃	B₄	B₅	B₆	B₇
Cotton	0	6	12	18	24	30	36
Oil	48	40	32	24	16	8	0

Show which country has the comparative advantage in producing cotton, and which country has the comparative advantage in producing oil?

Note that there is work involved with answering this question, and you must show enough of your work to make it very clear as to how you got your answer.

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.

Demand: $P = 100 - 2Q_d$

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.?

[6 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.

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.

[4 pts] a. IBM

[4 pts] b. PepsiCo

[4 pts] c. Coca Cola Ent.

Equations:

Below are equations you may use to calculate different values within this exam.

You will need to understand what each equation says, that will not be explained to you during the exam. Note that each of the equations below was written out in exactly the same format as what we discussed in class, so all variables in the equations below are the same as what we used in class. Each of the ε terms on the left-hand side of the “=” sign will also be defined within the exam.

$$\varepsilon_D = \frac{\% \Delta Q_X}{\% \Delta P_X} \quad (\text{own-price elasticity})$$

$$\varepsilon_I = \frac{\% \Delta Q_X}{\% \Delta I} \quad (\text{income elasticity})$$

$$\varepsilon_{CP} = \frac{\% \Delta Q_X}{\% \Delta P_Y} \quad (\text{cross-price elasticity})$$