Dr. Barry Haworth
University of Louisville
Department of Economics
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. If we assume, within the context of the production possibilities curve model, that our country produces two different goods, rather than three or more different goods, then what are we doing?
a. this is an example of us making a simplifying assumption
b. this is an example of us making a behavioral assumption
c. this is an example of us making an analytical assumption
d. this is an example of us engaging in positive economic analysis
e. this is an example of us engaging in normative economic analysis

3. If, when determining whether the relationship between variable A and variable B is positive or negative, we hold all other variables constant, then what are we doing?
a. this is an example of us making a simplifying assumption
b. this is an example of us making a behavioral assumption
c. this is an example of us making an analytical assumption
d. this is an example of us engaging in positive economic analysis
e. this is an example of us engaging in normative economic analysis

4. If someone says that we should increase the tax on cigarettes to raise the price of cigarettes, and reduce teen smoking, then what are we doing?
a. this is an example of us making a simplifying assumption
b. this is an example of us making a behavioral assumption
c. this is an example of us making an analytical assumption
d. this is an example of us engaging in positive economic analysis
e. this is an example of us engaging in normative economic analysis

5. On the production possibilities curve (PPC), points located inside the curve are:
a. unattainable points
b. equilibrium points
c. efficient points
d. inefficient points
e. none of the above

Assume that the country of Togo can produce either 4 units of shoes or 8 units of bananas.

6. Given the information above, which of the following statements is true:
a. in Togo, the opportunity cost of producing each unit of shoes is 2 units of bananas
b. in Togo, the opportunity cost of producing each unit of shoes is 8 units of bananas
c. in Togo, the opportunity cost of producing each unit of shoes is 1/2 unit of bananas
d. in Togo, the opportunity cost of producing each unit of shoes is 4 units of bananas
e. none of the above

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

Questions #8-12 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.

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

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

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

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

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

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 the supply of video games
b. decrease in the supply of video games
c. increase in the demand for video games
d. decrease in the demand for video games
e. decrease in the supply and decrease in the demand for 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 the supply and decrease in the demand for handguns

19. How would an increase in the price of substitutes for shoes affect the market for shoes?
a. increase in the supply of shoes
b. decrease in the supply of shoes
c. increase in the demand for shoes
d. decrease in the demand for shoes
e. decrease in the supply and decrease in the demand for 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 the supply of new cars
b. decrease in the supply of new cars
c. increase in the demand for new cars
d. decrease in the demand for new cars
e. decrease in the supply and decrease in the demand for 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 to become a lawyer, and more people enter this market as suppliers of law services, 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 we observe an increase in the equilibrium price and a decrease in the equilibrium quantity within the Louisville market for furniture. Which of the following best explains this change:
a. increase in the supply of furniture
b. decrease in the supply of furniture
c. increase in the demand for furniture
d. decrease in the demand for furniture
e. increase in the supply and decrease in the demand for furniture

24. Assume we observe a decrease in the equilibrium price and a decrease in the equilibrium quantity within the Louisville market for automobile tires. Which of the following best explains this change:
a. increase in the supply of automobile tires
b. decrease in the supply of automobile tires
c. increase in the demand for automobile tires
d. decrease in the demand for automobile tires
e. increase in the supply and decrease in the demand for automobile tires

25. Assume that the demand and supply curves below describe the Louisville market for good Z.

Demand: $P = 100 - 2Q_d$
Supply: $P = 20 + 8Q_s$

What is the equilibrium price and quantity for good Z in Louisville?
a. Q* = 10, P* = $80
b. Q* = 12, P* = $76
c. Q* = 20, P* = $60
d. Q* = 8, P* = $84
e. none of the above

26. Assume that the demand and supply curves below describe the Louisville market for good Z. Note that these two equations are the same as those in the previous question.

Demand: $P = 100 - 2Q_d$
Supply: $P = 20 + 8Q_s$

If a $60 price ceiling is placed on this market, then what would be the direct effect of that price ceiling on the Louisville market for good Z?
a. shortage of 12 units
b. shortage of 24 units
c. surplus of 15 units
d. shortage of 3 units
e. none of the above

27. 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

28. 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

29. Assume that soft drinks have an own price elasticity of -0.90. If so, then how does the quantity demanded of soft drinks change when the price of soft drinks increases by 5%:
a. the quantity demanded will increase by 4.5%
b. the quantity demanded will decrease by 0.18%
c. the quantity demanded will increase by 0.18%
d. the quantity demanded will decrease by 5.9%
e. none of the above

30. Which of the following is always a true statement:
a. an inelastic good is also an inferior good
b. an elastic good is also a luxury good
c. a normal good is also a luxury good
d. a luxury is also a normal good
e. all of the above

31. What does a positive cross price elasticity tell 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

32. Assume that when consumer income increases by 5%, consumers buy 4% of good W. If so, then how does an increase in consumer income affect the market for good W?
a. no change in equilibrium price and a decrease in equilibrium quantity
b. decrease in equilibrium price and an increase in equilibrium quantity
c. increase in equilibrium price and a decrease in equilibrium quantity
d. decrease in equilibrium price and a decrease in equilibrium quantity
e. increase in equilibrium price and an increase in equilibrium quantity

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. 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

35. If there is an increase in the cost of producing new automobiles, then how is the market for new automobiles affected?
a. increase in equilibrium price, but no change in consumer surplus
b. decrease in equilibrium price, and a decrease in consumer surplus
c. decrease in equilibrium price, and an increase in consumer surplus
d. increase in equilibrium price, and an increase in consumer surplus
e. increase in equilibrium price, and a decrease in consumer surplus

Part II. Short Answer Questions (30 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.

[6 pts] 1. Assume that Country A can produce 100 units of corn or 200 units of shoes and Country B can produce 200 units of corn or 500 units of shoes.

Show which country has the comparative advantage in producing shoes, and which country has the comparative advantage in producing corn.

Part II. Short Answer Questions cont.

Assume that someone has determined the following information about goods A, B and C. Note that you can use the equations on the back page of this exam to calculate the actual elasticity measures constructed from each point below.

- If consumer income increases by 6%, then people buy 8% more of good A
- If consumer income increases by 2%, then people buy 1% more of good B
- If consumer income increases by 5%, then people buy 2% less of good C
- If the price of good A increases by 3%, then people buy 4% less of good A
- If the price of good B increases by 4%, then people buy 3% less of good B
- If the price of good C increases by 3%, then people buy 1% less of good C
- If the price of good A increases by 2%, then people buy 4% less of good B

Use the information above to answer Questions 2 and 3 (below) and Question 4 (next page).

[8 pts] 2. Calculate and interpret the income elasticity measures for good A, good B and good C.

[8 pts] 3. Calculate and interpret the own price elasticity measures for good A, good B and good C.

Part II. Short Answer Questions cont.

Use the elasticity information above (from Questions 2 and 3) to answer the question below.

[8 pts] 4. Assume you want to know how a price decrease affects the total revenue of selling goods A and B. Use the information above to explain how a price decrease would affect the total revenue associated with selling good A, and how a price decrease would affect the total revenue associated with selling good B.

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.

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

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

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