ECO201: PRINCIPLES OF MICROECONOMICS

FIRST MIDTERM EXAMINATION

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FORM 4

Directions

1. Fill in your scantron with your unique-id and the form number listed on this page. Proper completion of this step of the directions is worth the equivalent of one question.

2. There are 40 multiple choice questions. All answers should be recorded on the scantron sheet. No credit will be given for answers placed elsewhere. Record your answers on the exam as well because this will be the record of your answers which you can use to determine which questions you got right or wrong on the exam.

3. A calculator is allowed. Cell phones or any other electronic device are prohibited. Access to any electronic device other than a calculator will be treated as a case of academic dishonesty.

4. You have until the end of the class period to finish the exam and complete the scantron. Additional time may be purchased at a price of 5 percentage points per minute.
1) If a firm cuts its price, total revenue will:
   a. always rise.
   b. rise only if demand is inelastic.
   c. rise only if demand is elastic.
   d. always fall

2) If the elasticity of demand for copper is 2.0 and the price of copper is increased by 5%, the number of passes sold would decrease by:
   a. 2%    b. 2.5%    c. 5%    d. 10%

3) If the elasticity of demand for copper is 2.0 and the price of copper is increased by 5%, total revenue from copper sales would
   a. increase 5%    b. decrease 5%    c. increase 3%    d. none of the above

4) If two commodities have a negative cross price elasticity of demand, this suggests that the products are:
   a. substitutes in production.
   b. complements in production
   c. substitutes in consumption
   d. complements in consumption.

5) It is less expensive to store frozen orange juice than oranges. As a consequence, we should expect that, compared to oranges, the supply of frozen orange juice is
   a. more elastic and a change in demand will have a greater effect on price.
   b. more inelastic and a change in demand will have a greater effect on price.
   c. more elastic and a change in demand will have a smaller effect on price.
   d. more inelastic and a change in demand will have a smaller effect on price.

6) Which of the following would make the demand for a product more elastic?
   a. a population with higher incomes.
   b. more substitutes in consumption for the product
   c. a shorter length of time to adjust to a price change
   d. all of the above.
7) Suppose that over the next year the equilibrium price and quantity of copper rises. These two simultaneous events could be explained by:
   a. an increase in the price of aluminum which can be used as a substitute for copper.
   b. higher consumer income if copper is an inferior good.
   c. a higher price for a complement in production to copper.
   d. all of the above.

8) When oil companies use hydraulic fracturing (“fracking”) to extract oil, natural gas is produced as a by-product. Consequently, if the demand for oil declines, we should expect the equilibrium price of natural gas will ____ and the equilibrium quantity of natural gas will ____.
   a. rise; rise   b. fall; fall   c. rise; fall   d. fall; rise

9) Many farmers could use their resources to grow either wheat or barley. As a consequence, wheat and barley are considered _____ and a decrease in the demand for wheat will cause ____.  
   a. substitutes in production; a decrease in the supply of barley.
   b. substitutes in production; an increase in the supply of barley.
   a. complements in production; a decrease in the supply of barley.
   b. complements in production; an increase in the supply of barley.

10) Suppose that there is new information that leads everyone to believe that the price of gold will be 20% higher one month from today. In today’s gold market, 
   a. the equilibrium gold price should rise and the equilibrium quantity should fall.
   b. the equilibrium gold price should rise, but the equilibrium quantity could rise or fall.
   c. the equilibrium gold price could rise or fall, but the equilibrium quantity will fall.
   d. the equilibrium gold price could rise or fall, but the equilibrium quantity will rise.

11) During a recession people’s incomes are falling and it is not uncommon for prices to fall. However, we should expect that, other things being the same, prices would fall most for: 
   a. luxury goods 
   b. normal goods 
   c. inferior goods 
   d. Giffen goods

12) An important input in the production of hybrid cars are batteries. If there is a technological breakthrough that reduces the cost of battery production, we should expect that: 
   a. the equilibrium price of batteries would decrease and the equilibrium quantity of batteries would increase 
   b. the equilibrium price and quantity of hybrid cars would increase 
   c. the equilibrium price and quantity of cars other than hybrids would fall 
   d. all of the above
To answer the next 4 questions, suppose there is a small island economy with 10 Hawkeyes and 30 Buckeyes. Each Hawkeye is capable of producing either 5 bushels of berries or 15 fish in a given day. Each Buckeye can produce either 4 bushels of berries or 8 fish in a given day. Both Hawkeyes and Buckeyes can also split their time across activities to produce a mix of berries or fish in a given day.

13) The comparative advantage in berries is held by the ______ and the comparative advantage in fish is held by the ______.
a. Buckeye; Buckeye  
b. Buckeye; Hawkeye  
c. Hawkeye; Buckeye  
d. Hawkeye; Hawkeye

14) If the economy is organized efficiently and produces 100 bushels of berries per day, Hawkeyes will produce ______ and Buckeyes will produce ______.
a. fish and berries; only fish  
b. only berries; fish and berries  
c. only fish; fish and berries  
d. only fish; only berries

15) If the economy is organized efficiently and produces 100 bushels of berries per day, the opportunity cost of an additional bushel of berries would be:
a. 2 fish  
b. 3 fish  
c. .5 fish  
d. .33 fish

16) If the economy is organized efficiently and produces 100 bushels of berries, what is the maximum amount of fish it can produce in a day?
a. 150  
b. 190  
c. 270  
d. none of the above
17) Over the past year, there has been a sharp decrease in the price of oil. Which of the following could explain this?
   a. a decrease in the price of a complement in consumption for oil.
   b. a decrease in the price of a complement in production to oil.
   c. an increase in the price of a substitute in production for oil.
   d. none of the above.

18) Which of the following would cause the PPF to shift to right as illustrated in the diagram above?
   a. discovery of a better way to catch fish.
   b. discovery of a better way to gather berries
   c. more workers.
   d. each of the above would cause the PPF to shift as illustrated.
To answer the next 3 questions, refer to the diagram below describing the market for gadgets.

19) Based on the diagram above, market equilibrium would generate (more, less) than the socially efficient amount to be produced and a deadweight loss of ______.
   a. less; $45        b. more; $45       c. more; $90       d. none of the above

20) Based on the diagram above, there must be a (positive, negative) externality of ____ for each gadget produced.
   a. positive; $10    b. negative; $10   c. positive; $30   d. none of the above.

21) If production of gadgets was increased from 100 to 130, the benefits to society of the additional 30 gadgets would be ______ and the cost to society of the additional 30 gadgets would be ______.
    a. $1800; $1350     b. $450; $1350    c. $1350; $450     d. none of the above.

To answer the next 3 questions, consider the following hypothetical supply and demand curves for peaches.
22) What is the elasticity of demand for peaches over the price range of $.26 to $.28 per peach?
   a. 3.9        b. 1.8        c. 0.9        d. 0.3

23) If the production of peaches increases from 80 to 120 million, the benefits the additional peaches will be _____ and the cost of the additional peaches will be _____.
   a. $11.6 million; $10.8 million
   b. $12.0 million; $11.6 million
   c. $24.0 million; $20.8 million
   d. none of the above

24) At the equilibrium price, what is the value of consumer’s surplus in the peach market?
   a. $1.6 million        b. $1.8 million        c. $2.4 million        d. $3.6 million
Suppose there are no positive or negative externalities associated with the production or consumption of peanuts and the government imposes a price ceiling at $2.00 per pound.

25) Compared to the equilibrium price and assuming no search costs, with the $2.00 price ceiling consumers would be
   a. better off by $10.0 million
   b. better off by $7.5 million
   c. worse off by $10.0 million
   d. none of the above

26) This price ceiling will result in:
   a. a shortage of 20 million pounds per year.
   b. a surplus of 20 million pounds per year
   c. a shortage of 10 million pounds per year
   d. neither a shortage or a surplus since the ceiling won’t be binding.

27) With the price ceiling of $2.00 and assuming no search costs, there would be a deadweight loss of
   a. $5.0 million
   b. $10.0 million
   c. $20.0 million
   d. $30.0 million

28) Compared to the equilibrium price and assuming no search costs with the $2.00 price ceiling producers would be worse off by
   a. $12.5 million
   b. $15.0 million
   c. $10.0 million
   d. none of the above.
29) If the government wants to achieve allocative efficiency in markets, which of the following types of commodities would be best to tax?
   a. vaccinations for contagious diseases because it helps prevent others from getting disease.
   b. airline tickets given the noise that jets create for those living near the airport.
   c. oil exploration because of the high price of oil
   d. hotel rooms at luxury hotels since they are bought mainly by the very rich

30) Suppose that a used textbook is sold on ebay for $30. The seller was willing to sell the text for as little as $5 and the buyer was willing to pay as much as $75. Based on this we can conclude that the sales of the text generated ___ of producer’s surplus and ___ of consumer’s surplus.
   a. $5; $75
   b. $45; $25
   c. $25; $45
   d. $75; $5
Suppose that Cincinnati government imposes a tax of $10 on every hotel room sold in the city limits. The tax is levied on the hotel owner. To answer the questions below, assume that the market for hotel rooms in Cincinnati before the tax is imposed is described in the diagram below.

To examine the effect of the $10 tax, you should draw the new supply and/or demand curves on top of the diagram above. Be careful to account for the fact that the tax is $10 when determining where to draw the new curve.

31) How much tax revenue should the Cincinnati government expect from the $10 room tax?
   a. less than $10,000 per day
   b. $10,000 per day.
   c. $15,000 per day.
   d. more than $15,000 per day

32) If the $10 tax is imposed on the hotel owners,
   a. the supply curve would shift upward by $10 and the price to consumers would rise by $10.
   b. the demand curve would shift downward by $10 and the price to consumers would fall by less than $10.
   c. the supply curve would shift upward by $10 and the price to consumers would rise by less than $10.
   d. none of the above.

33) In general, the room tax will generate a larger amount of tax revenue for the city if demand for rooms is more _____ or if the supply of rooms is more ______.
   a. elastic; elastic  b. elastic; inelastic  c. inelastic; elastic  d. inelastic; inelastic
34) Until 2002, the U.S. government enforced a quota limiting the production of peanuts in the U.S. In 2002, the quota system was abolished. With the elimination of the quota, we should expect that producer surplus for peanut growers ____ and consumers surplus to ____.
   a. increase; increase
   b. could either rise or fall; increase
   c. could either rise or fall; could either rise or fall
   d. decrease; increase.

35) Two economists disagree on how elastic the demand for peanuts is. Economist A believes that there are few good substitutes available for peanuts whereas economist B believes the opposite. Because of these differences in beliefs and the implication for the elasticity of peanut demand, economist A would predict that elimination of the peanut quota would cause peanut prices to drop ____ and peanut consumption to rise ____ than economist B believes.
   a. more; less.        b. more; more.        c. less; more.        d. less; less

36) Golf courses often give senior citizens discounts. This can best be explained by the fact that seniors have more time to both golf and search for discounts. This implies that, compared to younger golfers, senior citizens have a
   a. greater price elasticity of demand.
   b. smaller price elasticity of demand
   c. greater income elasticity of demand
   d. smaller income elasticity of demand

37) In general, the consumer’s share of a room tax would be greater if there (were, were not) nearby cities without a room tax or if the people renting the rooms had (higher, lower) incomes.
   a. were; higher
   b. were; lower
   c. were not; higher
   d. were not; lower
38) Suppose that cigarette taxes are increased from $1.25 to $2.00 in Ohio. The consequences of this tax increase will vary with the elasticity of demand for cigarettes. As the demand for cigarettes becomes more inelastic, the tax increase will cause:
   a. a smaller increase in cigarette prices
   b. a smaller increase in tax revenue.
   c. a smaller decrease in cigarette sales.
   d. all of the above.

39) Suppose that abolishing the U.S. peanut quota causes peanut prices to drop $.50 per pound and consumption of peanuts to increase from 80 to 100 million pounds per year. This suggests that elimination of the peanut quota caused consumers surplus to increase by (Hint: draw the supply and demand curves that reflect the information provided to calculate your answer.)
   a. $40 million per year
   b. $50 million per year.
   c. $45 million per year.
   d. none of the above.

40) **FILL IN YOUR UNIQUE ID AND FORM NUMBER ON THE SCANTRON. THIS IS WORTH THE EQUIVALENT OF ONE QUESTION.**