ECO201: PRINCIPLES OF MICROECONOMICS

FIRST MIDTERM EXAMINATION

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FORM 1

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 may not be used as a calculator. Using a cell phone or other web enabled device will be considered 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.
To answer the next 5 questions, suppose there is a small island economy with 30 Russians and 20 Czechs. In a given day, a Russian can catch either 10 fish or gather 50 coconuts. A Czech can catch either 5 fish or 40 coconuts.

1) The absolute advantage in fishing is held by the ______ and the absolute advantage in coconuts is held by the ______.
   a. Czechs; Czechs.
   b. Czechs; Russians.
   c. Russians; Russians.
   d. Russians; Czechs.

2) The comparative advantage in fishing is held by the ______ and the comparative advantage in coconuts is held by the ______.
   a. Czechs; Czechs.
   b. Czechs; Russians.
   c. Russians; Russians.
   d. Russians; Czechs.

3) If the economy produces 320 fish per day, what is the maximum number of coconuts it can produce in a day?
   a. 400
   b. 520
   c. 620
   d. none of the above

4. Suppose the economy is operating on its production possibilities frontier and producing 320 fish per day. If it increases production of fish production by 10, the opportunity cost of the extra 10 fish will be _____ coconuts.
   a. 40
   b. 50
   c. 80
   d. none of the above.

5) If the economy is organized efficiently, the opportunity cost of an additional fish is
   a. 5 coconuts until fish production reaches 300, at which point the opportunity cost rises to 8 coconuts.
   b. 5 coconuts until fish production reaches 100, at which point the opportunity cost rises to 8 coconuts.
   c. .20 coconuts until fish production reaches 300, at which point the opportunity cost falls to .125 coconuts.
   d. .125 coconuts until fish production reaches 100, at which point the opportunity cost rises to .20 coconuts.
6) If an economy has achieved productive efficiency, we know that:
a. the economy is producing on its PPF.
b. the economy is producing outside its PPF.
c. the economy has no deadweight loss
d. the economy is maximizing the sum of consumer and producer surplus

7) If an economy has achieved allocative efficiency,
a. marginal benefit must equal marginal cost for each good and service produced
b. the economy is maximizing the sum of consumer and producer surplus
c. it must be impossible to produce more of one good without giving up something that consumers value more highly.
d. all of the above.

8) Suppose that gasoline prices rise and the result is an increase in the equilibrium price and quantity of type A cars but a decrease in the equilibrium price and quantity of type B cars. This would suggest that gasoline and type A cars are _____ but gasoline and type B cars are _____.
a. substitutes in production; complements in production.
b. complements in production; complements in production.
c. substitutes in consumption; complements in consumption.
d. complements in consumption; substitutes in consumption.

9) Whenever farmers raise cattle, fertilizer is created from the waste. Because of this relationship, an increase in the demand for cattle should cause:
a. an increase in the supply of fertilizer and lower fertilizer prices.
b. a decrease in the supply of fertilizer and higher fertilizer prices.
c. an increase in the demand for fertilizer and higher fertilizer prices.
d. a decrease in the demand for fertilizer and lower fertilizer prices.

10) Suppose that over the next year, the equilibrium price of chicken wings falls and the equilibrium quantity of chicken wings rise. These two simultaneous events could be explained by:
a. an increase in consumer income if chicken wings are a normal good.
b. an increase in consumer income if chicken wings are an inferior good.
c. an increase in the demand for a complement in production to chicken wings.
d. an increase in the demand for a substitute in production for chicken wings.

11) A recent study estimates that the price elasticity of demand for airline tickets is 2.4. Based on this information, if the airline industry increases ticket prices by 5%, the number of tickets sold would decrease by:
a. 12.0 percent
b. 7.4 percent
c. 0.5 percent
d. 2.9 percent
Consider the demand curve below to answer the next two questions.

12) Assuming demand is given by the curve above,
   a. demand is elastic at a price of 20
   b. demand is unit elastic at a price of 25
   c. demand is inelastic at a price of 30
   d. all of the above.

13. Assuming demand is given by the curve above,
   a. if price is increased from 15 to 20, total revenue would rise.
   b. if price is increased from 25 to 30, total revenue would rise
   c. if price is decreased from 45 to 40, total revenue would fall
   d. all of the above

14) If a firm lowers its price, total revenue will:
   a. always fall.
   b. rise only if demand is inelastic.
   c. rise only if demand is elastic.
   d. rise only if demand is unit elastic.
15) If the price elasticity of demand for cigarettes is .7, a 5 percent increase in the price of cigarettes would cause:
   a. the total revenue generated from cigarette sales to increase by approximately 1.5 percent
   b. the total revenue generated from cigarette sales to drop by approximately 1.5 percent
   c. the total revenue generated from cigarette sales to drop by approximately 8.5 percent.
   d. the total revenue generated from cigarette sales to increase by approximately 8.5 percent.

16) Average income per capita is $44,710 in the U.S. and $7,870 in Mexico. This should imply that:
   a. the price elasticity of demand for a product like Coca-Cola will be smaller in the U.S. than in Mexico.
   b. the price elasticity of demand for a product like Coca-Cola will be larger in the U.S. than in Mexico.
   c. the price elasticity of supply for a product like Coca-Cola will be more inelastic in the U.S. than in Mexico.
   d. The price elasticity of supply for a product like Coca-Cola will be more elastic in the U.S. than in Mexico.

17) CDs and CD players are likely to have
   a. a negative cross price elasticity of demand.
   b. a positive cross price elasticity of demand
   c. a negative income elasticity of demand
   d. a perfectly inelastic supply curve

18) It is much cheaper to store canned beans than fresh beans. As a consequence, we should expect that, compared to canned beans, supply for fresh beans 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.

19) Consumers surplus is defined as:
   a. the total amount that consumers are willing to pay for a good.
   b. the total amount that consumers are willing to pay for a good minus the amount they actually pay for the good.
   c. the marginal benefit of a good minus its marginal cost.
   d. the price of a good minus its marginal cost.
To answer the next 3 questions, consider the following hypothetical supply and demand curves for apples.

20) What is the elasticity of demand for apples over the price range of $.18 to $.20 per apple?
   a. 0.11
   b. 0.26
   c. 3.80
   d. 5.72

21) At the equilibrium price, what is the value of consumer’s surplus?
   a. $5.4 million
   b. $5.8 million
   c. $2.7 million
   d. $4.2 million

22) At the equilibrium price, what is the value of producer’s surplus?
   a. $5.4 million
   b. $5.8 million
   c. $2.7 million
   d. $4.2 million
23) Suppose that a seller lists a Beatles CD for sale on eBay. The seller is willing to sell the CD for anything above $1. The buyer who buys the CD is willing to pay as much as $8, but ends up paying $4 for the CD. Based on this, we can conclude that:
   a. consumer’s surplus on the CD sale is $4
   b. producer’s surplus on the CD sale is $3
   c. assuming the sale is still made, if the final price negotiated rises by $1, the sum of consumer and producer surplus is unchanged.
   d. all of the above.

24) Assuming no externalities, which of the following statements would be FALSE?
   a. marginal benefit increases as the quantity of the good consumed increases.
   b. marginal benefit is the benefit a person receives from consuming one more unit of the good
   c. marginal benefit is equal to marginal cost if allocative efficiency is obtained
   d. marginal cost increases as the quantity of the good produced increases.

25) Suppose that whenever a firm produces electricity with a coal powered generator, pollutants are emitted that add to global warming. If government does not intervene in the market for coal-powered electricity, we should expect to find that at the market outcome
   a. SMB>SMC and the market will produce more than the allocatively efficient amount of electricity.
   b. SMC>SMB and the market will produce more than the allocatively efficient amount of electricity.
   c. PMB>PMC and the market will produce less than the allocatively efficient amount of electricity.
   d. PMC>PMB and the market will produce more than the allocatively efficient amount of electricity.
   (Note: SMB=social marginal benefit; SMC=social marginal cost; PMB=private marginal benefit; PMC=private marginal cost).

26) The allocatively efficient amount of a commodity is the quantity where _______ and a competitive market will produce the quantity where _______
   a. PMC=SMC; PMB=SMB.
   b. SMB=SMC; PMB=PMC
   c. PMB=SMB; PMC=SMC
   d. PMC=PMC; SMB=SMC
   (Note: SMB=social marginal benefit; SMC=social marginal cost; PMB=private marginal benefit; PMC=private marginal cost).
27) In a competitive market, the demand curve is always the same as _____ and the supply curve is always the same as _____.
   a. private marginal cost; private marginal benefit.
   b. private marginal benefit; private marginal cost.
   c. social marginal cost; social marginal benefit.
   d. social marginal benefit; social marginal cost.

28) If the government wants to achieve allocative efficiency in markets, which of the following types of commodities would be best to subsidize?
   a. vaccinations for contagious diseases because it helps prevent others from getting disease.
   b. airport construction given the noise pollution that it generates for those near the airport.
   c. oil exploration because of the high price of oil
   d. food because it is a necessity for anyone to live.

To answer the next two questions, refer to the diagram below describing the market for gadgets.

29) Based on the diagram above, the market equilibrium would generate (more, less) than the socially efficient amount to be produced and a deadweight loss of _____.
   a. more; $1000
   b. less; $1000
   c. less; $500
   d. more; $500

30) The market could be moved to the socially efficient outcome with a (subsidy, tax) of _____.
   a. subsidy; $20
   b. subsidy; $10
   c. tax; $10
   d. tax; $20
Suppose there are no positive or negative externalities associated with gasoline and the government imposes a price ceiling at $2.50 per gallon.

31) This price ceiling will result in:
   a. a surplus of 50 million gallons per day
   b. a shortage of 50 million gallons per day.
   c. a surplus of 25 million gallons per day.
   d. a shortage of 25 million gallons per day.

32) Compared to the equilibrium price of $2.75 per gallon, with the $2.50 price ceiling consumers would be
   a. better off by $15.625 million
   b. better off by $18.750 million
   c. worse off by $18.750 million
   d. worse off by $15.625 million

33) Compared to the equilibrium price of $2.75 per gallon, with the $2.50 price ceiling producers would be
   a. worse off by $18.750 million
   b. worse off by $25.0 million
   c. worse off by $21.875 million
   d. better off by $18.750 million

34) With the price ceiling of $2.50 per gallon, there would be a deadweight loss of
   a. $3.125 million
   b. $4.375 million
   c. $5.275 million
   d. $6.250 million.
Suppose that initially there is no tax on steel, but the government introduces a new tax and the supply curve is shifted from $S_0$ to $S_1$ in the diagram below.

**NOTE THAT QUANTITY IS MEASURED IN MILLIONS.**

35) How much tax revenue would be generated by this tax?
   a. $500 million.
   b. $1.0 billion.
   c. $2.0 billion.
   d. $4.0 billion.

36) This tax would make steel buyers worse off by:
   a. $0
   b. $1.25 billion
   c. $2.50 billion.
   d. $3.00 billion.

37) The consumers’ share of this tax is _____ and the producers’ share is _____.
   a. $5; $5.
   b. $10; $10.
   c. $20; 0.
   d. $0; $20.

38) If demand for steel was more inelastic,
   a. the tax revenue from the tax would be greater
   b. the consumer’s share of the tax would be smaller
   c. the decrease in the equilibrium quantity from the tax would be larger
   d. none of the above
39) Since passage of the Agricultural Adjustment Act of 1993, only farmers who own or lease a production quota are legally allowed to grow peanuts for human consumption in the U.S. Based upon our analysis of how quotas work, **elimination of the peanut quota** would cause:

a. peanut consumers in the U.S. to be better off  
b. peanut producers to receive a lower price for peanuts, but they could be better or worse off.  
c. a reduction in the deadweight loss associated with peanut production.  
d. all of the above.

40) Currently, Ohio imposes a tax of $1.25 per pack on cigarettes. If Ohio doubles the tax on cigarettes to $2.50 per pack, the total tax revenue from cigarettes

a. would double.  
b. would less than double unless demand is perfectly inelastic.  
c. could increase or decrease if demand is elastic.  
d. both b and c.