EC101 Midterm 2 F2015

INSTRUCTIONS (***Read Carefully***):

ON YOUR QUESTION BOOKLET:
Fill in your name, Student ID, Discussion Section Number (e.g. D5) and your signature.

ON YOUR SCANTRON:
Enter the Course Number (EC101 DD or EE) and date on the lines at the top-left. In the boxes below, enter your Student ID, your DISCUSSION SECTION number (D1 - D9, E0 - E9), your NAME and your EXAM VERSION into the Scantron computer sheet. Be sure that you “bubble” all entries. I will subtract up to 5 points as punishment for errors in these data!

DURING THE EXAM:
Students who wish to leave the room for any reason must leave the Question Booklet and Scantron sheet with the instructor or teaching fellow. Students in EC101DD MUST turn in both the Question Booklet and the Scantron sheet at the end of the exam and exit from the front of the room. Students in EC101EE should keep their Question Booklet and turn in only their Scantrons. All students must show their BU Student IDs as they leave the exam room.

MULTIPLE-CHOICE QUESTIONS:
Choose the BEST answer for each of the multiple-choice questions. (Only ONE answer is allowed, even when more than one of the answers is technically correct.) On the Question Booklet, CIRCLE the letter that you chose, so that you have a record of your answers. Then BUBBLE it on the Scantron sheet for grading.

Never cross out an answer on your Scantron. Use a pencil to bubble your answers, and keep a good eraser with you. If you bubble the wrong answer on the Scantron, erase your mark COMPLETELY, and then bubble the correct answer.

***YOU MAY NOT USE A CALCULATOR, CELL PHONE OR LAPTOP.

***However, INTERNATIONAL STUDENTS may use electronic translators or dictionaries.

You have 60 minutes to complete the exam. Good luck!

DO NOT OPEN THIS BOOKLET OR TURN IT OVER
[until told to do so]
**Figure IFM.** Suppose $S$ represents the market supply curve of domestic producers in the US. After imports are allowed, foreign producers shift the market supply to $S'$. The line $D$ is US market demand. \([\text{Hint: the area of a triangle} = \text{base} \times \text{height} / 2]\]

1. **See Figure IFM.** Before the foreign producers enter, the surplus of US consumers is_______.
   a. $10
   b. $20
   c. $80
   d. $45

2. **See Figure IFM.** After the foreign producers enter, surplus of US consumers is_______.
   a. $20
   b. $10
   c. $80
   d. $45

3. **See Figure IFM.** The positions of the supply curves $S$ and $S'$ imply that some of the foreign firms _______ than any of the domestic firms.
   a. are less competitive
   b. are larger
   c. charge higher prices
   d. have lower costs

4. **See Figure IFM.** After the foreign producers enter, the producer surplus of domestic producers
   a. increases by $5.
   b. increases by $15.
   c. decreases by $5.
   d. decreases by $15.

5. If all fixed costs are sunk, then
   a. the firm is operating in the short run.
   b. marginal cost is constant.
   c. the firm will go out of business.
   d. the quantity supplied will be reduced.

6. Why does a firm in a perfectly competitive industry want to charge the market price?
   a. If a firm charges more than the market price, it loses all its customers to other firms.
   b. The firm can sell as many units of output as it wants to at the market price.
   c. If a firm charges less than the market price, it loses potential revenue.
   d. **ALL** of the above are correct.

7. Which of the following is an example of a positive externality?
   a. Mary couldn’t catch the flu from Sue, because Sue was vaccinated.
   b. Sue caught the flu, because Sue wasn’t vaccinated.
   c. Mary caught the flu from Sue, because Mary wasn’t vaccinated.
   d. Sue didn’t catch the flu, because Sue was vaccinated.

8. One reason that nonprice rationing often creates losses of surplus is because
   a. the wrong people get the goods.
   b. governments tend to waste tax revenues.
   c. equity is decreased.
   d. the market-equilibrium price goes up.

**Scenario MRZ.** Suppose Firm XYZ produces in a perfectly competitive market and has the following marginal costs: for each unit from 1 to 100, $MC = $20, and for each unit from 101 to 1000, $MC = $30.

9. **See Scenario MRZ.** If the market price is $25, then the firm will produce _____ units and get a producer surplus of______.
   a. 1000, $5000
   b. 100, $500
   c. 0, 0
   d. **UNDEFINED**, because price doesn’t equal marginal cost

10. **See Scenario MRZ.** If the market price is $15 then Firm XYZ will
   a. produce 100 units and raise its price to $20.
   b. continue to produce until price equals marginal cost.
   c. produce zero.
   d. **NONE** of the above

11. The equilibrium price and quantity in a perfectly competitive market maximize
   a. output of goods or services in that market.
   b. the quantity demanded from that market.
   c. both equity and efficiency in that market.
   d. social surplus from that market.
12. Suppose in a perfectly competitive market, firms increase production past the market-equilibrium output. Then social surplus decreases because
   a. marginal cost is greater than willingness to pay.
   b. consumers won’t buy the excess goods.
   c. consumers will buy more than they can use.
   d. producers’ profits fall.

13. In a perfectly competitive equilibrium, the demand for the product of a single firm
   a. is perfectly elastic.
   b. is vertical.
   c. is unit elastic.
   d. depends on the elasticity of the market demand.

14. Taxes can be useful tools of government policy, because
   a. taxes allow governments to supply public goods and services like education and police protection.
   b. taxes can be used to increase equity even when they reduce social surplus.
   c. taxes can increase social surplus when there are negative externalities.
   d. ALL of the above

15. A competitive market allocates resources efficiently when
   a. there are negative externalities, but not when there are positive externalities.
   b. there are positive externalities, but not when there are negative externalities.
   c. the buyers and sellers are not affected by externalities.
   d. the buyers and sellers are the only people affected by the transaction.

16. When profit-maximizing firms in competitive markets are earning profits,
   a. the most inefficient firms will be encouraged to leave the market.
   b. market demand must exceed market supply at the market equilibrium price.
   c. new firms will enter the market.
   d. market supply must exceed market demand at the market equilibrium price.

17. Which of the following is true about the willingness-to-pay (WTP) for a good?
   a. WTP is equal to consumer surplus.
   b. WTP is likely to underestimate the utility a poor person would get from the good.
   c. In perfect competition, WTP can be derived from the supply curve.
   d. WTP must be less than the price of the good.

18. See Figure BRL. When the supply shifts and the price ceiling is applied,
   a. a shortage will occur at the new market price of P2.
   b. the market price will stay at P1.
   c. a surplus will occur at the new market price of P2.
   d. the market price will increase to P3.

19. See Figure BRL. When the supply shifts and the price ceiling is applied, the quantity of gasoline that will be bought and sold is
   a. Q3.
   b. between Q1 and Q3.
   c. at least Q1.
   d. less than Q3.

20. See Figure BRL. Suppose the supply shifts back from S3 to S1, but the price ceiling remains in place. Then,
   a. the quantity bought and sold will decrease.
   b. the price ceiling will cause a larger deadweight loss than before.
   c. the price ceiling will no longer affect the price.
   d. the price will remain at P2.

21. Suppose a tax of $1 per unit is imposed on a good. Then the more elastic is the supply of the good,
   a. the smaller is the response of quantity supplied to the tax.
   b. the larger is the tax burden on sellers relative to the tax burden on buyers.
   c. the larger is the deadweight loss of the tax.
   d. ALL of the above are correct.
Table STX. The table below displays the willingness to pay of each consumer for his first three oranges (no one wants to eat more than three). Alex, Barb, and Carlos are the only buyers of oranges.

<table>
<thead>
<tr>
<th></th>
<th>1st Orange</th>
<th>2nd Orange</th>
<th>3rd Orange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alex</td>
<td>$2.00</td>
<td>$1.50</td>
<td>$0.75</td>
</tr>
<tr>
<td>Barb</td>
<td>$1.50</td>
<td>$1.00</td>
<td>$0.80</td>
</tr>
<tr>
<td>Carlos</td>
<td>$0.75</td>
<td>$0.25</td>
<td>$0</td>
</tr>
</tbody>
</table>

22. See Table STX. If the market price of an orange is $1.20, consumer surplus amounts to
a. $5.00.
b. $0.70.
c. $1.10.
d. $1.40.

23. See Table STX. The market quantity of oranges demanded is exactly 5 if the price of an orange \( P \) satisfies
a. $0.80 < P < $1.50.
b. $0.75 < P < $0.80.
c. $0.80 < P < $1.00.
d. $1.00 < P < $1.50.

24. If demand is perfectly price inelastic and an excise tax is imposed, then
a. the tax burden is shared between buyer and seller.
b. deadweight loss will be infinite.
c. the tax burden falls entirely on the buyer.
d. the tax incidence will depend on the legal assignment of duty to pay.
e. the tax burden falls entirely on the seller.

25. Which of the following is a variable cost of producing physical copies of the Hubbard/O’Brien textbook?
   a. the cost of editing
   b. the cost of customer service
   c. the cost of writing the book
   d. the cost of graphic design

26. Suppose firms in a competitive market have no fixed costs and increasing marginal costs. Then, the marginal cost of unit 29 is
   a. the area under the supply curve.
b. the area between the supply curve and the price.
c. the height of the supply curve at unit 29.
d. equal to the price.

27. Removing price ceilings tends to
   a. create a Pareto improvement.
b. increase the quantity supplied.
c. increase consumer surplus.
d. reduce profits.

28. Suppose winter comes early in California and reduces the size of the lemon crop. What happens to consumer surplus in the market for lemons?
   a. Consumer surplus is not affected by this change in market forces.
b. Consumer surplus decreases.
c. It depends on whether the elasticity of demand is more or less than 1.
d. Consumer surplus increases.

Figure BOS. Suppose the government imposes a $10 per unit tax on a good. [Hint: the area of a triangle = base \times height / 2.]

29. See Figure BOS. The tax causes consumer surplus to decrease by
   a. $144.
b. $36.
c. $216.
d. $108.

30. See Figure BOS. The government collects _____ as tax revenue.
   a. $96.
b. $120.
c. $144.
d. $60.

31. See Figure BOS. The tax will
   a. reduce producer surplus by $72.
b. reduce consumer surplus by $24.
c. create a deadweight loss of $180.
d. ALL of the above
32. Economic efficiency may not be compatible with equity, because
   a. marginal costs are increasing in the great majority of firms.
   b. governments tend to regulate competitive markets when prices are too high.
   c. rich people tend to work harder than poor people.
   d. the incentives required for efficiency may make some people rich and leave others poor.

33. In connection with pollution, social surplus is maximized if
   a. if the benefit of pollution abatement is maximized.
   b. if as much pollution is prevented as technology allows.
   c. the cost of abatement is minimized.
   d. **NONE** of the above.

34. Private negotiation is most likely to solve problems created by pollution when there are
   a. a small number of people who produce the pollution and who suffer from it.
   b. people who suffer from the pollution around the world.
   c. laws that prohibit the pollution.
   d. high taxes on each unit of pollution.

35. The marginal cost (MC) of producing a unit is
   a. greater than the MC of the previous unit.
   b. the same as the MC of the previous unit if the units are identical.
   c. less than the MC of the previous unit.
   d. the opportunity cost of producing the unit.

36. Sophie works 20 hours per week at the BU Bookstore and earns $9.00 per hour. Her boss decides to raise her wage to $18.00 per hour. Then, Judy says to herself, “Great, now I can work more and make lots of money.” This implies that
   a. she does not want to ‘buy’ more leisure as she becomes richer.
   b. the substitution effect on her demand for leisure is stronger than the income effect.
   c. her demand curve for leisure is not downward sloping.
   d. the income effect on her demand for leisure is stronger than the substitution effect.

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**Figure NEX.** The Market For Plastics

![Market Diagram](image)

37. **See Figure NEX.** Without any government regulation, how much plastic would be produced?
   a. 900
   b. 200
   c. 650
   d. 500

38. **See Figure NEX.** What quantity of plastics maximizes social surplus?
   a. 500
   b. 200
   c. 650
   d. 450

39. **See Figure NEX.** What level of excise tax would maximize social surplus?
   a. $2.00
   b. $ .50
   c. $1.50
   d. 0 [Any tax will reduce surplus.]

40. Kansas and Iowa grow corn and wheat. Kansas has a comparative advantage in growing corn over Iowa if
   a. Kansas needs less land to grow a ton of corn than Iowa does.
   b. Kansas has to give up less wheat than Iowa does in order to grow another ton of corn.
   c. the value of resources needed to grow a ton of corn is lower in Kansas than in Iowa.
   d. the weather in Kansas is more suitable for growing corn than the weather in Iowa.