EC101 DD/EE **Midterm 2** **November 7, 2017** **Version 02**

Name (last, first): |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

Student ID: |**U**|__|__|__|__|__|__|__|__| **Discussion Section:** |__|__|

Signature_____

EC101 DD/EE F17 Midterm 2

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. Be sure that you "bubble" all entries (fill in the small circles) . 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 are 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.

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.

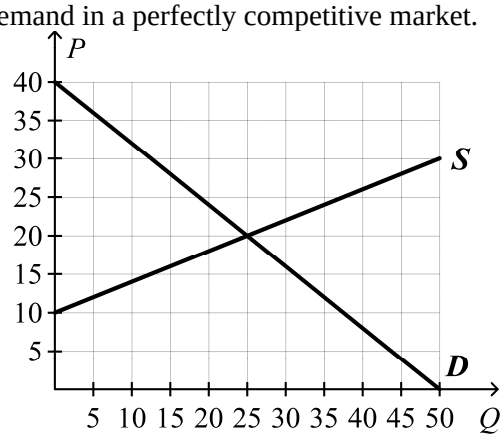
You have 60 minutes to complete the exam. Good luck!

Hint: the area of a triangle = base x height / 2

DO NOT OPEN THIS BOOKLET OR TURN IT OVER
[until told to do so]

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

Figure SSD. The graph below describes supply and demand in a perfectly competitive market.

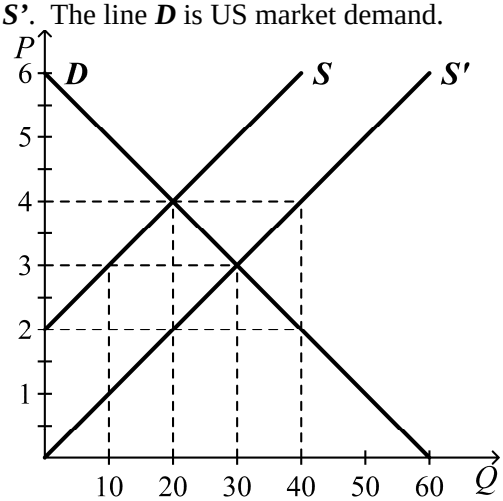


2. **See Figure SSD.** In equilibrium, total surplus is
   a. 375.
   b. 1000.
   c. 250.
   d. 750.

3. **See Figure SSD.** The equilibrium allocation of resources is
   a. efficient because consumer surplus is maximized at the equilibrium.
   b. inefficient because consumer surplus is larger than producer surplus at the equilibrium.
   c. efficient because total surplus is maximized when 25 units are produced and sold.
   d. inefficient because total surplus is maximized when 50 units of output are produced and sold.

4. **See Figure SSD.** Suppose the government allows only 10 units to be produced and sold. Then
   a. the marginal value of the last unit exceeds its marginal cost.
   b. consumer surplus is maximized.
   c. the marginal cost of the last unit is the same as its marginal value.
   d. total surplus is maximized.

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.



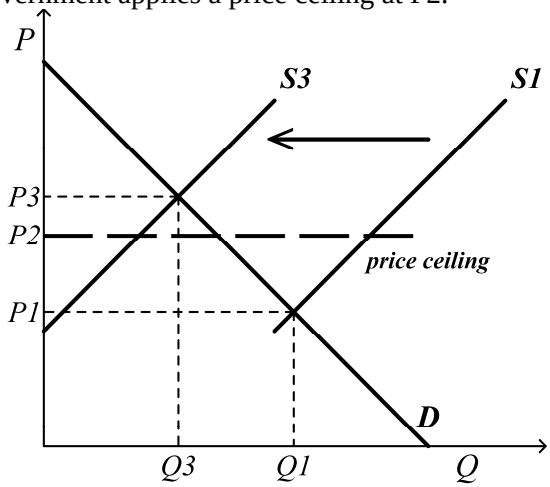
5. **See Figure IFM.** After the foreign producers enter, the surplus of US consumers
   a. does not change.
   b. decreases by $25.
   c. increases by $25.
   d. goes to zero.

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

7. **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. have lower costs
   b. are less competitive
   c. pay higher wages
   d. charge higher prices

8. Your roommate leaves trash in your dormitory room without cleaning it up. The trash doesn't bother her at all, but you would be willing to pay $40 to live in a clean room. Her opportunity cost of cleaning the trash would be $50, but yours would be only $30. Which is an economically efficient way of solving the trash problem?
   a. You clean up the trash yourself.
   b. You leave a dead mouse in her bed as punishment for her behavior.
   c. You do nothing and live with the trash.
   d. You offer to pay her $30 to clean up the trash.

Figure PGL. Market for Gasoline. Suppose the supply of gasoline shifts from ***S1*** to ***S3***, and the government applies a price ceiling at P2.



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

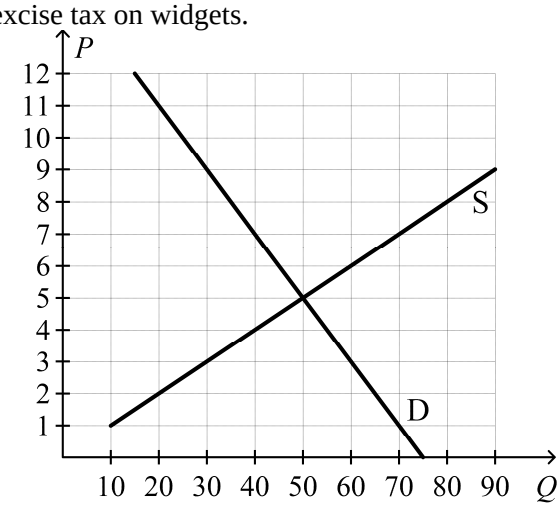
10. **See Figure PGL**. When the supply shifts and the price ceiling is applied, the quantity of gasoline that will be sold and bought is
    a. Q3.
    b. between Q1 and Q3.
    c. less than Q3.
    d. at least Q1.

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

12. Suppose a price ceiling is below the equilibrium price. Then removing the price ceiling is likely to
    a. increase the quantity supplied.
    b. create a Pareto improvement.
    c. increase consumer surplus.
    d. reduce profits.

13. An international student spends $80 for a ticket to game six of the baseball World Series. But after an hour, she decides that baseball is extremely boring. She is tired of watching the players spitting and scratching their bodies. If she is economically rational, she should
    a. leave and do something more fun.
    b. stay there, because she will lose consumer surplus if she leaves.
    c. stay there, because $80 was an avoidable cost.
    d. stay there, because the $80 is a sunk cost.

Scenario TXE. The graph below shows supply and demand in a perfectly competitive market for widgets. Suppose that the government decides to impose a $3 excise tax on widgets.



14. **See Figure TXE.** The price that buyers pay after the tax is imposed is
    a. $5.
    b. $7.
    c. $8.
    d. $6.

15. **See Figure TXE.** The part of the tax paid by buyers is
    a. $1.50 per unit.
    b. $2 per unit.
    c. $1 per unit.
    d. The answer depends on who sends the tax to the government.

16. **See Figure TXE.** How much tax revenue is generated in the market for widgets?
    a. $250
    b. $150
    c. $120
    d. The answer depends on whether the buyer or the seller sends the tax to the government.

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

18. Assume the US government passes a law making it much easier for US firms to export beef. Which is most likely to occur?
    a. American consumers will face lower prices for food containing beef.
    b. US beef producers will hire more workers.
    c. The surplus of US beef producers will fall.
    d. A large deadweight loss will be created.

19. Which of the following is the best example of a positive externality?
    a. cigarettes with a low cost of production
    b. a student who asks good questions in class
    c. a restaurant that serves excellent food
    d. a box of chocolates of higher than average quality

20. Which of the following statements is *not* correct about a market in equilibrium?
    a. Those sellers whose costs are less than the price choose to produce and sell the good.
    b. Consumer surplus will be equal to producer surplus.
    c. The price determines which buyers and which sellers participate in the market.
    d. Those buyers who value the good more than the price choose to buy the good.

21. Since air pollution creates a negative externality,
    a. governments should encourage private firms to consider only private costs.
    b. social welfare is maximized when all air pollution is eliminated.
    c. the free-market result maximizes social welfare.
    d. some, but not all, of the air pollution should be eliminated.

22. A Texas rancher owns a business that sells beef in a perfectly competitive market, and he also eats beef himself. Beef is a normal good. If the market price of beef rises, then
    a. he will eat the same amount of beef, because he gets beef for free.
    b. he will eat less beef, because the demand curve is downward sloping.
    c. he will eat more beef, because beef is a normal good.
    d. the answer will depend on the strengths of the income and substitution effects.

23. Trade raises the economic welfare of a nation in the sense that
    a. since countries can choose which products to trade, they will pick those products that are most beneficial to society.
    b. everyone in an economy gains from trade.
    c. the nation joins the international community when it begins to engage in trade.
    d. the gains of the winners exceed the losses of the losers.

Table EXR. Residents of a small town can buy watchdogs to keep thieves away from their houses. Unfortunately, the dogs bark a lot and annoy the neighbors. *Each* watchdog has the costs and benefits listed here.

Dog Number	Private Benefit	Private Cost	External Cost
1	$22	$ 6	$5
2	$20	$ 8	$5
3	$18	$11	$5
4	$16	$14	$5
5	$14	$18	$5

24. **See Table EXR.** The social surplus created by the second dog is
    a. $17.
    b. $7.
    c. $20.
    d. $12.

25. **See Table EXR.** The market-equilibrium quantity of watchdogs bought would be
    a. 3.
    b. 6.
    c. 5.
    d. 4.

26. **See Table EXR.** What is the smallest excise tax that could move the market to the socially optimal number of watchdogs?
    a. $5
    b. $10
    c. $1
    d. $3

27. A tax on gasoline often reduces road congestion, because
    a. the tax raises the private cost of driving.
    b. gasoline is a normal good, and driving is an inferior good.
    c. the tax raises the social cost of driving.
    d. gasoline is an inferior good, and driving is a normal good.

28. Economic efficiency may not be compatible with equity, because
    a. governments tend to regulate competitive markets when prices are too high.
    b. rich people tend to work harder than poor people.
    c. the incentives required for efficiency may make some people rich and leave others poor.
    d. marginal costs are increasing in the great majority of firms.

29. If the labor supply curve is extremely inelastic, a tax on labor
    a. would be paid mainly by employers.
    b. has little impact on the amount of work that workers are willing to do.
    c. has a large deadweight loss.
    d. raises a small amount of tax revenue.

30. Social surplus is equal to
    a. value to buyers *minus* cost to sellers.
    b. consumer surplus *times* producer surplus.
    c. value to buyers *minus* profit to sellers.
    d. consumer surplus *minus* producer surplus.

Table PSM. Each of the following sellers can produce *one* fancy dress at the cost listed below.

Seller	**Cost**
Abby	$1,500
Bobby	$1,200
Carlos	$1,000
Dianne	$750
Evalina	$500

31. **See Table PSM**. If the market price is $1,000, the producer surplus in the market is
    a. $750.
    b. $700.
    c. $3,700.
    d. $2,250.

32. **See Table PSM**. If the market price is $1,100, the combined total cost of all participating sellers is
    a. $1,250.
    b. $2,700.
    c. $2,250.
    d. $3,700.

33. If you know Dilip's willingness to pay for different quantities of apples, but you have no information about the apple market, then you can
    a. construct his demand curve for apples.
    b. calculate the number of apples he will buy.
    c. determine the price of apples.
    d. ***NONE*** of the above

34. Which of the following outcomes is ***unlikely*** in an unregulated free-market economy?
    a. shortages of many goods
    b. prostitution
    c. many poor people
    d. a market in human kidneys

35. The opportunity cost of producing the 15th unit of a good is
    a. the average cost of all the units produced.
    b. the marginal cost of the 15th unit.
    c. 1/15 of the fixed cost.
    d. the price.

36. When firms have an incentive to enter a competitive market, their entry will
    a. raise the market price.
    b. change the cost curves of firms that remain in the market.
    c. increase demand for the product.
    d. lower profits for firms already in the market.

37. When there's no fixed cost and marginal cost is increasing, the marginal cost curve is the same as the
    a. demand curve.
    b. willingness-to-pay curve.
    c. supply curve.
    d. ***NONE*** of the above

38. In order to demonstrate their generosity, dairy farmers decide to sell as much milk as consumers want to buy at half the competitive-equilibrium price. Then
    a. producer surplus will increase.
    b. social surplus will fall.
    c. social surplus will increase.
    d. consumer surplus will fall.

39. Suppose there are rent controls in the market for apartments. Then,
    a. the efficient number of apartments will be rented.
    b. those willing to pay the most will get the apartments.
    c. some consumers will pay lower rents than they would pay without controls.
    d. ***ALL*** of the above

40. A perfectly competitive firm charges the market price for its product, mainly because
    a. customers assume it will sell at the market price.
    b. government regulations require firms to sell at the market price.
    c. arbitrageurs would enter the market.
    d. if it sets a higher price, it would lose all its customers.