SECOND HOURLY EXAMINATION
ECON 200
Spring 2006

STUDENT'S NAME:_________________________________________________

STUDENT'S SOCIAL SECURITY NUMBER:___________________________

PLEASE CIRCLE YOUR TEACHING ASSISTANT'S NAME:

Robin Banerjee
Owen Haaga
Fernando Im
Andrew Weaver
Alex Whalley

DAY AND TIME YOUR SECTION MEETS:______________________________

ENTER THE NUMBER 135246 UNDER "SPECIAL CODES" ON THE SCANTRON SHEET

BEFORE YOU BEGIN PLEASE MAKE SURE THAT YOUR EXAMINATION HAS BEEN DUPLICATED AND CORRELATED CORRECTLY. THERE SHOULD BE 22 MULTIPLE CHOICE QUESTIONS AND THREE PROBLEMS. THE EXAM HAS NINE PAGES INCLUDING THIS COVER SHEET.

ANSWER THE MULTIPLE CHOICE PROBLEMS ON THE SCANTRON SHEET. ANSWER THE PROBLEMS ON THIS EXAMINATION SHEET.

BE SURE TO FILL-IN YOUR NAME (LAST NAME FIRST) AT THE TOP OF THE SCANTRON SHEET. FILL IN YOUR STUDENT IDENTIFICATION NUMBER UNDER "IDENTIFICATION NUMBER" ON THE SCANTRON SHEET.

WRITE YOUR TA'S NAME IN THE UPPER-RIGHT HAND CORNER OF YOUR SCANTRON SHEET.

MULTIPLE CHOICE:_____PROB1:_____PROB2:_____PROB3:_____TOTAL:_______

University of Maryland Honor Pledge

The University is committed to Academic Integrity, and has a nationally recognized Honor Code, administered by the Student Honor Council. In an effort to affirm a community of trust, the Student Honor Council proposed and the University Senate approved Honor Pledge. The University of Maryland Honor Pledge reads:

"I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment)."

Please rewrite the exact wording of the pledge, followed by your signature in the space below:

Pledge:      _________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

Your Signature:_________________________________________
Question 1 (20 points)

A consumer with income $1500 initially faces prices $20 per unit for food and $50 per unit for clothing.

i) Characterize the consumer’s budget constraint in a diagram with units of clothing on the horizontal axis. Clearly indicate the value of each intercept and the slope of the budget constraint.

ii) Using indifference curves, show an optimal choice of this consumer in the diagram. Show the relationship of the indifference curve and the budget constraint at her optimal choice point for this consumer.

iii) Suppose that food is a normal good. Show in your diagram, the effect of an increase in income for the consumer to $2000 on her budget set, and on her optimal choice of food and clothing. On the basis of the information supplied, must the demand for food rise? Must the demand for clothing rise?

iv) Now suppose income is $1500, as before. In a new diagram, show the effect of a fall in price of food on her budget set, and on her optimal choice of food and clothing. Separate out the substitution effect and the income effect.
Question 2 (14 Points)

Suppose that bread baking companies operate upwind from a small community. As they bake, they emit a beautiful smell of baking bread over the town, the smell of which invariably makes everyone happier. The companies also, of course, sell their bread.

i) In a demand and supply diagram, characterize the (private) supply curve and (private) demand curve in the market for bread. Show the equilibrium price and quantity.

ii) In the same diagram, characterize the social cost curve of the supply of bread and illustrate the socially optimal level of bread output.

iii) Indicate either in your diagram or in a very precise verbal description, how a government policy could be used to achieve the socially optimal level of bread output.
Use the graph to fill in the following table for a market when a tax $T$ is imposed on consumers.

<table>
<thead>
<tr>
<th></th>
<th>Without Tax</th>
<th>With Tax</th>
<th>Change Due to Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Surplus</td>
<td></td>
<td></td>
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<tr>
<td>Producer Surplus</td>
<td></td>
<td></td>
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<tr>
<td>Tax Revenue</td>
<td></td>
<td>XXXXXXXX</td>
<td></td>
</tr>
<tr>
<td>Total Surplus</td>
<td></td>
<td></td>
<td>XXXXXXXX</td>
</tr>
<tr>
<td>Consumer Price Paid</td>
<td></td>
<td></td>
<td>XXXXXXXX</td>
</tr>
<tr>
<td>Equilibrium Quantity</td>
<td></td>
<td></td>
<td>XXXXXXXX</td>
</tr>
</tbody>
</table>
Multiple Choice
(Each question is worth 2.3 points. Please select THE BEST answer.)

1. Suppose demand and supply are neither perfectly elastic nor perfectly inelastic. When a tax on a good is enacted
   a. buyers and sellers share the burden of the tax regardless of who it is levied on.
   b. buyers always bear the full burden of the tax.
   c. sellers always bear the full burden of the tax
   d. sellers bear the full burden if the tax is levied on them, but buyers bear the full burden if the tax is levied on them.

2. A tariff is
   a. a tax on imported goods.
   b. a tax on exported goods.
   c. a limit on imported goods
   d. a tax on luxuries.

3. When negative externalities are present in a market
   a. private costs will be greater than social costs.
   b. social costs will be greater than private costs.
   c. government regulation to resolve the problem is necessary.
   d. the market will not be able to reach any equilibrium situation.

4. Assume that Tammy cleans Ryan’s house weekly for $80. Ryan would be willing to pay as much as $100 weekly to have his house cleaned. Tammy’s opportunity cost of house cleaning is $70. If Tammy cleans Ryan’s house, Ryan’s consumer surplus is
   a. $100
   b. $80
   c. $70.
   d. $20.

5. All of the following are properties of indifference curves EXCEPT
   a. higher indifference curves are preferred to lower ones.
   b. indifference curves are downward sloping.
   c. indifference curves do not cross.
   d. indifference curves are bowed outward.

6. If a country’s domestic autarky price of a good is higher than the world price and the country allows trade,
   a. the country will become an exporter of the good.
   b. the country will become an importer of the good.
   c. the country will neither import nor export the good.
   d. additional information is needed to determine if the country will export or import the good.
7. If education produces positive externalities, we would
   a. want government to tax education.
   b. want government to subsidize education.
   c. expect people to realize the benefits and therefore cause demand for education to
      increase.
   d. expect colleges to relax admission requirements.

Questions 8 and 9 concern the following graph:

8. According to the graph, if trade in shoes is allowed in Korea,
   a. consumer surplus will increase and producer surplus fall.
   b. consumer surplus will decrease and producer surplus increase.
   c. consumer surplus and producer surplus will increase
   d. producer surplus and consumer surplus will be unaffected.

9. According to the graph, if trade in shoes is allowed in Korea, the price of shoes in Korea will
   be
   a. $12 per pair.
   b. $5 per pair
   c. between $5 and $12 per pair.
   d. higher than $12 per pair.
10. A tax placed on chocolate will
   a. reduce the equilibrium price consumers pay for chocolate and increase the equilibrium quantity.
   b. increase the equilibrium price consumers pay for chocolate and reduce the equilibrium quantity.
   c. increase the equilibrium price consumers pay for chocolate and increase the equilibrium quantity.
   d. reduce the equilibrium price consumers pay for chocolate and reduce the equilibrium quantity.

11. A tariff on a product makes domestic producers
   a. better off and domestic buyers worse off.
   b. worse off and domestic buyers worse off.
   c. better off and domestic buyers better off.
   d. worse off and domestic buyers better off.

12. Dioxin emission that results from the production of paper is a good example of a negative externality because
   a. self-interested paper firms are generally unaware of environmental regulations.
   b. there are fines for producing too much dioxin.
   c. self-interested paper producers will not consider the full cost of the dioxin pollution they create.
   d. toxic emissions are the only form of an externality.

13. When a country allows trade and becomes an exporter of a good, domestic producers
   a. gain and domestic consumers lose.
   b. lose and domestic consumers gain.
   c. and domestic consumers both gain.
   d. and domestic consumers both lose.

14. In a graph with quantity of Y on the vertical axis and quantity of X on the horizontal axis, the budget constraint for a consumer with income $100, price of Y equal to $5 and price of X equal to $10
   a. rotates clockwise when the price of X falls.
   b. shifts outward in a parallel fashion when the price of X falls.
   c. rotates counter-clockwise when the price of X falls.
   d. shifts inward in a parallel fashion when the price of X falls.

15. The loss in total surplus resulting from a tax is called
   a. a deficit.
   b. an economic loss.
   c. a deadweight loss.
   d. an inefficiency.
16. A cheeseburger is
   a. excludable and rival.
   b. excludable and nonrival.
   c. nonexcludable and rival.
   d. nonexcludable and nonrival.

17. Fixed costs can be defined as costs that
   a. vary inversely with production.
   b. vary in proportion with production.
   c. are incurred only when production is large enough.
   d. may be incurred even if nothing is produced.

18. The fish in the ocean are an example of a
   a. common resource.
   b. public good.
   c. private good.
   d. natural monopoly.

The following figure depicts a total cost function for a firm that produces cookies. Question 19 concerns this figure.
19. Which of the following is true of the production function (not pictured) that underlies this total cost function?
   (i) Total output increases as the quantity of inputs increase but at a decreasing rate.
   (ii) Marginal product is diminishing for all levels of input usage
   (iii) The slope of the production function decreases as the quantity of inputs increases.

   a. (i) only.
   b. (ii) and (iii) only.
   c. (i) and (iii) only.
   d. All of the above.

20. Both public goods and common resources are
   a. rival
   b. nonrival
   c. excludable.
   d. nonexcludable.

21. Which of the following is likely to have the smallest deadweight loss?
   a. a “head” tax (that is, a tax everyone must pay regardless of what one buys or does).
   b. an income tax.
   c. a tax on compact discs.
   d. a tax on caviar.

22. An externality
   a. is characterized as a form of market failure.
   b. causes markets to allocate resources efficiently.
   c. strengthens the role of the invisible hand in the marketplace.
   d. requires the producer to compensate society.