

Instructions: Please fill in your name and student number on every page of the exam questionnaire and on the NCS sheet. Use the NCS sheet to answer the Multiple Choice questions. This exam has 10 pages—check that this copy has all of them. Good luck!

Multiple-Choice Questions (80 points—2 points per question)

Identify the letter of the choice that best completes the statement or answers the question.

1. If Brock is willing to pay \$400 for a new suit, but is able to buy the suit for \$350, his consumer surplus is
 - a. \$50
 - b. \$150
 - c. \$350
 - d. \$400

Table 1

BUYER	WILLINGNESS TO PAY
MIKE	\$50.00
SANDY	\$30.00
JONATHAN	\$20.00
HALEY	\$10.00

2. **Refer to Table 1.** If the table represents the willingness to pay of 4 buyers and the price of the product is \$15, then who would be willing to purchase the product?
 - a. Mike
 - b. Mike and Sandy
 - c. Mike, Sandy, and Jonathan
 - d. Mike, Sandy, Jonathan, and Haley
3. **Refer to Table 1.** If the table represents the willingness to pay of 4 buyers and the price of the product is \$15, then what would be the consumer surplus in the market?
 - a. \$45
 - b. \$55
 - c. \$100
 - d. \$110
4. Donald produces nails at a cost of \$200 per ton. If he sells the nails for \$500 per ton, his producer surplus is
 - a. \$200 per ton.
 - b. \$300 per ton.
 - c. \$500 per ton.
 - d. \$700 per ton.
5. Total surplus in a market equals
 - a. Value to buyers - Amount paid by buyers.
 - b. Amount received by sellers - Costs of sellers.
 - c. Value to buyers – Cost to sellers.
 - d. None of the above.

Figure 2

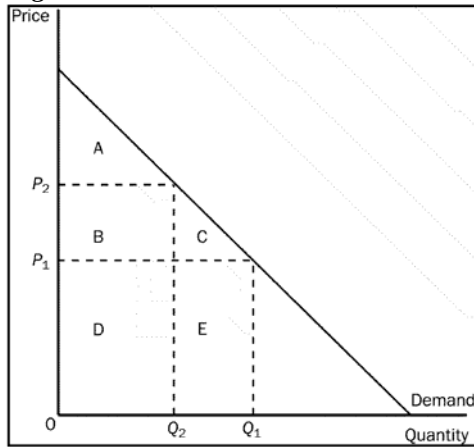
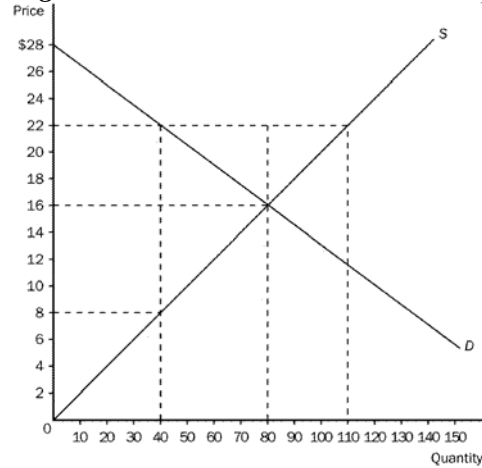


Figure 3



6. **Refer to Figure 2.** When the price rises from P_1 to P_2 , consumer surplus
 - a. increases by an amount equal to A.
 - b. decreases by an amount equal to $B + C$.
 - c. increases by an amount equal to $B + C$.
 - d. decreases by an amount equal to C.

7. We can say that the allocation of resources is efficient if
 - a. producer surplus is maximized.
 - b. consumer surplus is maximized.
 - c. total surplus is maximized.
 - d. None of the above are correct.

8. **Refer to Figure 3.** At the market equilibrium price, producer surplus would be
 - a. \$480.
 - b. \$640.
 - c. \$1,120.
 - d. \$1,280.

9. Moving production from a high-cost producer to a low-cost producer will
 - a. lower total surplus.
 - b. raise total surplus.
 - c. lower producer surplus.
 - d. raise producer surplus but lower consumer surplus.

10. Economic analysis uses which of the following to judge the effect of taxes on economic welfare?
 - a. government spending
 - b. consumer and producer surplus
 - c. equilibrium price and quantity
 - d. opportunity cost
 - e. elasticity

Table 2

PRICE	QUANTITY DEMANDED	QUANTITY SUPPLIED
\$12.00	0	12
\$10.00	4	10
\$ 8.00	8	8
\$ 6.00	12	6
\$ 4.00	16	4
\$ 2.00	20	2

11. **Refer to Table 2.** Total surplus will be maximized if the price is
 - a. \$10.00.
 - b. \$8.00.
 - c. \$6.00.
 - d. \$4.00.

12. When the government places a tax on a product
 - a. the cost of the tax to buyers and sellers will be less than the revenue raised from the tax by the government.
 - b. the cost of the tax to buyers and sellers will equal the revenue raised from the tax by the government.
 - c. the cost of the tax to buyers and sellers exceeds the revenue raised from the tax by the government.
 - d. without additional information, such as the elasticity of demand for this product, it is impossible to compare tax cost with tax revenue.

13. Total surplus with a tax is equal to the sum of
 - a. consumer surplus and producer surplus.
 - b. consumer surplus minus producer surplus.
 - c. consumer surplus, producer surplus, and total surplus.
 - d. consumer surplus, producer surplus, and tax revenue.

14. Taxes cause deadweight losses because
 - a. they transfer purchasing power to the government which always wastes money.
 - b. they prevent buyers and sellers from realizing some of the gains from trade.
 - c. marginal buyers and sellers leave the market causing the quantity sold to fall.
 - d. Both b and c are correct.

15. Assume that a tax is levied on a good and that the government uses the revenue to clean up lethal toxic waste that would cause irreparable harm to a large number of people. In this case which of the following would NOT occur?
 - a. a decrease in consumer surplus to consumers of the taxed good
 - b. a decrease in producer surplus to producers of the taxed good
 - c. a probable increase in the total economic welfare of society
 - d. a significant decrease in the total economic welfare of society

University of Ottawa

ECO1104 E

Midterm # 2 (November 23, 2010)

Name _____

Student number _____

Scenario 1

Sheila offers to do Heidi's housework for \$20 per week. Heidi's opportunity cost of doing housework is \$30 per week, and Sheila's opportunity cost of doing housework is \$10 per week.

16. **Refer to Scenario 1.** Assuming that Sheila can re-negotiate her contract with Heidi, what is the maximum tax that the government could levy on Sheila and still have her do Heidi's housework?
 - a. \$9 per week.
 - b. \$19 per week.
 - c. \$29 per week.
 - d. \$39 per week.

17. The amount of deadweight loss from taxes depends on
 - a. the price elasticity of demand and supply.
 - b. how much of the tax revenue the government plans to spend.
 - c. the product the government is planning to tax.
 - d. All of the above are correct.

18. Which one of these taxes is the most economically efficient?
 - a. A tax on luxury cars.
 - b. A tax on milk.
 - c. A \$100 head tax (e.g., a \$100 on everyone who is 21 or older).
 - d. A tax on diamond rings.

19. The term market failure refers to
 - a. a situation in which the market, on its own, fails to allocate resources efficiently.
 - b. an unsuccessful advertising campaign which reduces demand.
 - c. a situation in which competition among firms becomes ruthless.
 - d. a firm which is forced out of business because of losses.

20. An externality is the impact of
 - a. society's decisions on the well-being of society.
 - b. a person's actions on that person's well-being.
 - c. one person's actions on the well-being of a bystander.
 - d. society's decisions on the well-being of one person in the society.
 - e. government taxes on corporations.

21. If an externality is present in a market, economic efficiency may be enhanced by
 - a. increased competition.
 - b. weakening property rights.
 - c. better informed market participants.
 - d. government intervention.
 - e. Both a and b are correct.

22. Which of the following illustrates the concept of a negative externality?
 - a. A college professor plays a vigorous game of racquet ball with the racquet he recently purchased.
 - b. A flood wipes out a farmer's entire corn crop.
 - c. A college student plays his new stereo system in the residence at 2:00 a.m.
 - d. A janitor eats a Big Mac during his lunch break.

University of Ottawa

ECO1104 E

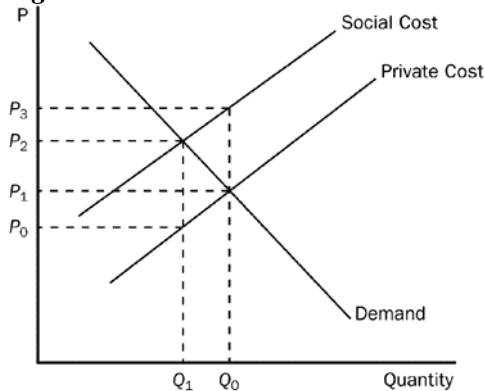
Midterm # 2 (November 23, 2010)

Name _____

Student number _____

23. If a paper manufacturer does NOT bear the entire cost of the dioxin it emits it will
- emit lower levels of dioxin than is socially efficient.
 - emit higher levels of dioxin than is socially efficient.
 - emit an acceptable level of dioxin.
 - not emit any dioxin in an attempt to avoid paying the entire cost.
24. A positive externality
- causes the product to be overproduced.
 - provides an additional benefit to market participants.
 - benefits consumers because it results in a lower equilibrium price.
 - is a benefit to a market bystander.
25. If education produces positive externalities we would expect
- government to tax education.
 - government to subsidize education.
 - people to realize the benefits and therefore cause demand for education to increase.
 - colleges to relax admission requirements.
26. The demand curve for a product reflects the
- value of the product to consumers.
 - cost of the product to consumers.
 - quantity consumers are able to purchase.
 - price the product will sell for in the market.
 - value of the product to producers.
27. The supply curve for a product reflects the
- value of the product to suppliers.
 - quantity buyers will ultimately purchase of the product.
 - cost to sellers of producing the product.
 - seller's profit of producing the product.
28. In an economy, when goods do not have a price, what/who primarily ensures that the good is produced?
- entrepreneurs
 - the government
 - charities
 - nature
29. Which of the following would NOT be considered a private good?
- tennis shoes
 - pizza
 - french fries
 - beer
 - All of the above are private goods.

Figure 4



30. Refer to Figure 4. The marginal
- benefit of the positive externality is measured by $P_3 - P_1$.
 - cost of the negative externality is measured by $P_3 - P_2$.
 - cost of the negative externality is measured by $P_3 - P_1$.
 - cost of the negative externality is measured by $P_3 - P_0$.
31. Refer to Figure 4. Which price and quantity combination represents the social optimum?
- P_0 and Q_1 .
 - P_2 and Q_1 .
 - P_1 and Q_2 .
 - P_2 and Q_2 .
32. Refer to Figure 4. To correct for the externality in this market the government should
- impose a tax on this product.
 - provide a subsidy for this product.
 - encourage firms to supply more of this product by taxing them.
 - produce the product itself.
33. Both public goods and common resources are
- rival.
 - nonrival.
 - excludable.
 - nonexcludable.
34. For both public goods and common resources, an externality arises because
- something of value has no price attached to it.
 - the goods are undervalued by society.
 - the social optimum level of output is lower than the market equilibrium's.
 - All of the above are correct.
35. The government provides public goods because
- private firms are incapable of producing public goods.
 - free-rides make it difficult for private markets to supply the socially optimal quantity.
 - markets are always better off with some government oversight.
 - external benefits will occur to private producers.

University of Ottawa

ECO1104 E

Midterm # 2 (November 23, 2010)

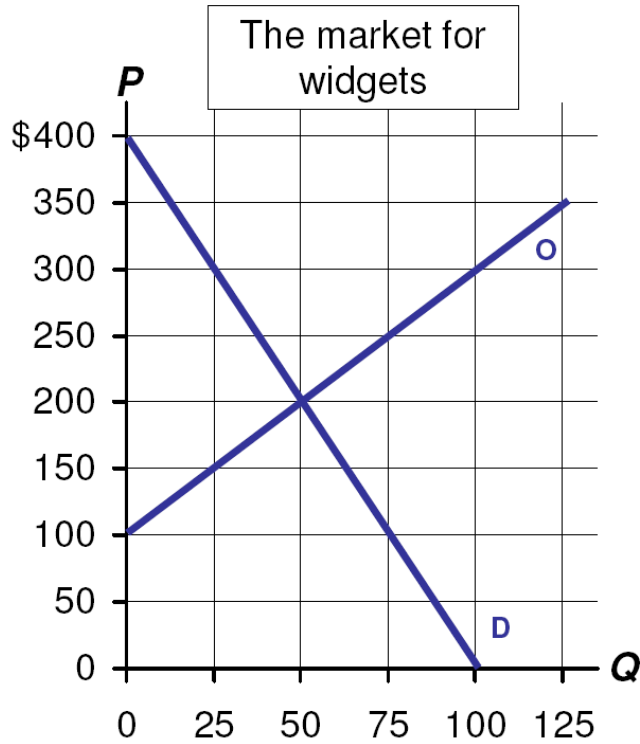
Name _____

Student number _____

36. Basic research is a public good because it
- is difficult to exclude those who might benefit from it.
 - is used to develop public goods.
 - always benefits developed countries at the expense of developing countries.
 - is a rival good.
37. Market failure with common resources occurs because
- the government imposes a negative externality on everyone's consumption of the resource.
 - society is unable to value the social loss that results from individual consumption.
 - consumption can be privately profitable even when it is socially undesirable.
 - All of the above are correct.
38. In the market for a good like ice-cream cones,
- an inefficient number of ice-cream cones will be produced.
 - the sum of producer surplus and consumer surplus is minimized.
 - price adjusts to balance supply and demand.
 - the price established in the market will not reflect the value of ice cream cones to consumers.
 - a black market will be established.
39. The privately-owned school system in Smalltown has a virtually unlimited capacity. It accepts all applicants and operates on both tuition and private donations. Although every resident places value on having an educated community, the school's revenues have suffered lately due to a large decline in private donations from the elderly population. Since the benefit each citizen receives from having an educated community is a public good, which would NOT be true?
- The free-rider problem causes the private market to undersupply education to the community.
 - The government can potentially help the market reach a socially optimal level of education.
 - A tax increase to pay for education could potentially make the community better off.
 - The private market is the best way to supply education.
40. Consider the following problems: Overcrowded public highways, overfishing in the ocean, polluted air, and the near-extinction of the wild rhinoceros. What do these problems all have in common?
- Private markets could easily solve them if governments let the markets function.
 - They would all go away if an intensive public-information campaign were made.
 - They are all the result of a failure to establish clear property rights over something of value.
 - They are all the necessary result of market economies.

Short-Answer Questions (20 points)
Answer in the space provided.

41. (5 points) Consider the market for widgets as described in the figure below.



Estimate the deadweight loss of a \$150 tax on widgets?

University of Ottawa

ECO1104 E

Midterm # 2 (November 23, 2010)

Name _____

Student number _____

42. (5 points) Using a supply and demand diagram, demonstrate how a positive externality leads to market inefficiency. How might the government help to eliminate this inefficiency?

University of Ottawa

ECO1104 E

Midterm # 2 (November 23, 2010)

Name _____

Student number _____

43. (10 points) Using supply and demand analysis, show the effect on economic welfare of the introduction of an effective price floor on milk. Who would you expect to benefit from this price floor, the dairy farmers or the consumers of milk? Who would you expect to be hurt? You may want to use a graph to explain your answers.