

Midterm 2
60 minutes
Econ 1101: Principles of Microeconomics
November 11, 2013

Exam Form A

Name _____ Student ID number _____

Signature _____

Teaching Assistant _____ Section _____

The answer form (the bubble sheet) **and** this question form will both be collected at the end of the exam. Fill in the information above and then on the answer form, please write the following information

- name,
- student ID number,
- recitation number
- **Form A** (see the bottom part of the answer sheet for this bubble.)

Fill in the corresponding bubbles. Sign your name on the answer form.

You will be awarded 1.5 bonus points for filling the correct name and ID on the answer form.

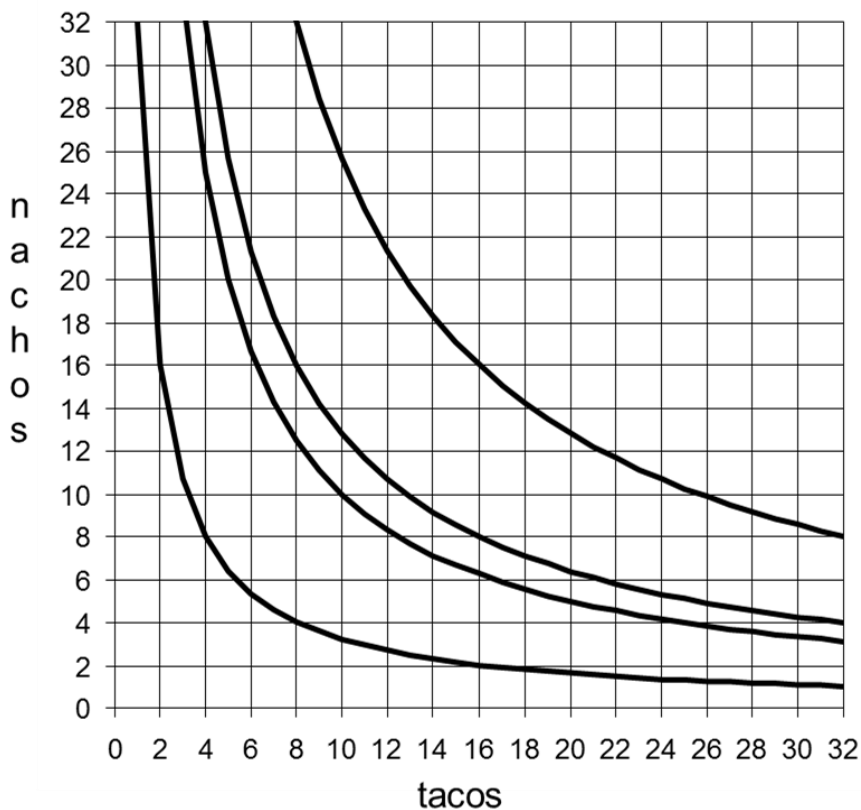
There are 35 questions. All questions are multiple choice. Each question has a single answer. Select the **best** answer for each question and fill in the corresponding bubble on the answer sheet.

Use a **Number 2** pencil to fill in your answer.

You are not permitted to use calculators or to open books or notes.

- For question 1, please fill in (a) on your bubble sheet, as this is exam form A. (We are using this question to verify the exam form.)
 - Form A

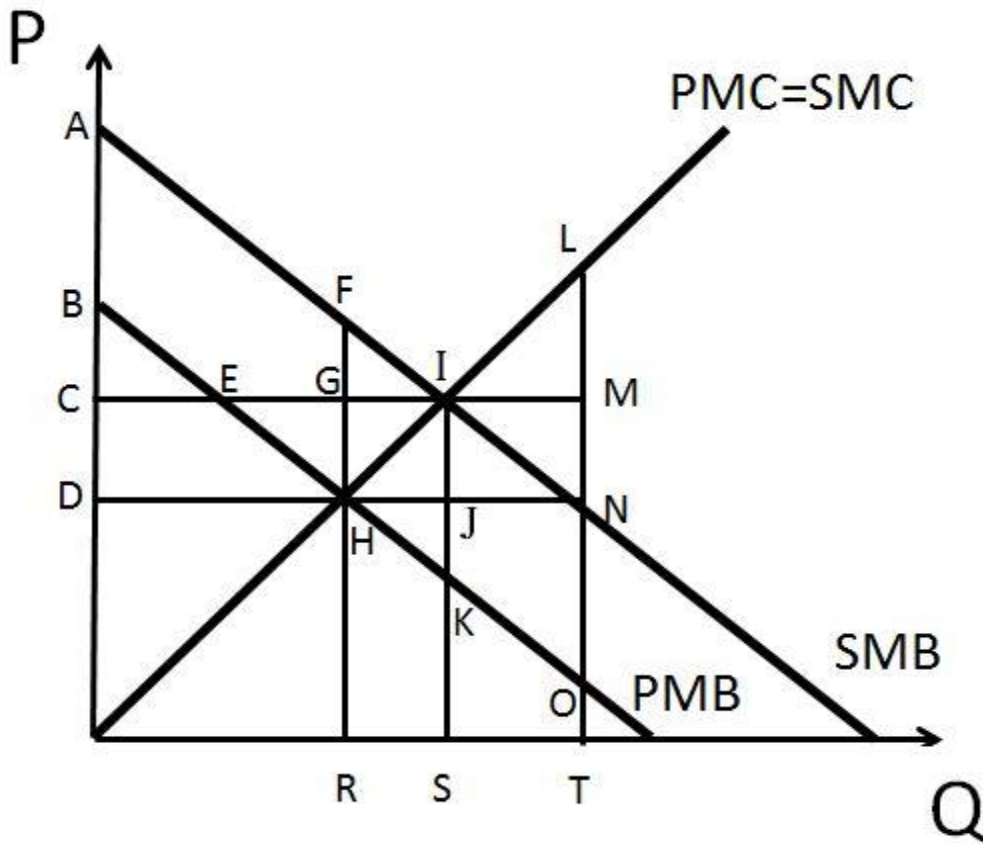
The next 7 questions on this page and the next page refer to the graph below. Wildcat consumes tacos and nachos and the graph illustrates his indifference curves.



- From Wildcat's indifference curves, we can determine that Wildcat is indifferent between having (10 tacos, 10 nachos) and
 - (8 tacos, 16 nachos)
 - (32 tacos, 8 nachos)
 - (16 tacos, 2 nachos)
 - (8 tacos, 32 nachos)
 - (4 tacos, 24 nachos)
- Suppose Wildcat has an income of \$48, that $P^{\text{Nacho}} = \$3$, and that $P^{\text{tacos}} = \$6$. Draw Wildcat's budget constraint in the above figure. From this we can see that the opportunity cost of one more taco equals
 - $\frac{1}{2}$ nachos
 - 1 nachos
 - 2 nachos
 - 3 nachos
 - 4 nachos

4. At this income and prices of tacos and nachos, the optimal consumption bundle for Wildcat is
- (4 tacos, 8 nachos)
 - (4 tacos, 16 nachos)
 - (8 tacos, 4 nachos)
 - (8 tacos, 16 nachos)
 - (10 tacos, 10 nachos)
5. Suppose Wildcat's income rises to \$96. The **change** in Wildcat's demand for nachos from the change in income equals
- +0
 - +2
 - +4
 - +6
 - +8
6. Suppose Wildcat initially has an income of \$48 and the initial prices are $P^{\text{Nacho}} = \$3$, and that $P^{\text{tacos}} = \$6$. Then the price of tacos falls to $P^{\text{tacos}} = \$2$, while the price of nachos remains unchanged. The substitution effect of the price change increases the demand for tacos by how many units?
- 3
 - 0
 - 3
 - 5
 - 8
7. Again suppose Wildcat initially has an income of \$48 and the initial prices are $P^{\text{Nacho}} = \$3$, and that $P^{\text{tacos}} = \$6$. Then the price of tacos falls to $P^{\text{tacos}} = \$2$, while the price of nachos remains unchanged. The income effect of the price change increases the demand for nachos by how many units?
- 3
 - 0
 - 3
 - 5
 - 8
8. Regarding the effect of the decrease of the price of tacos in the previous question, which of the following statements are true?
- The substitution effect and the income effect on the demand for nachos go in the **same** direction.
 - The substitution effect and the income effect on the demand for nachos go in the **opposite** direction.
 - The substitution and income effects exactly cancel out and the net effect of the price decrease on the demand for tacos is zero.
 - None of the above.

The next 3 questions refer to the following figure:



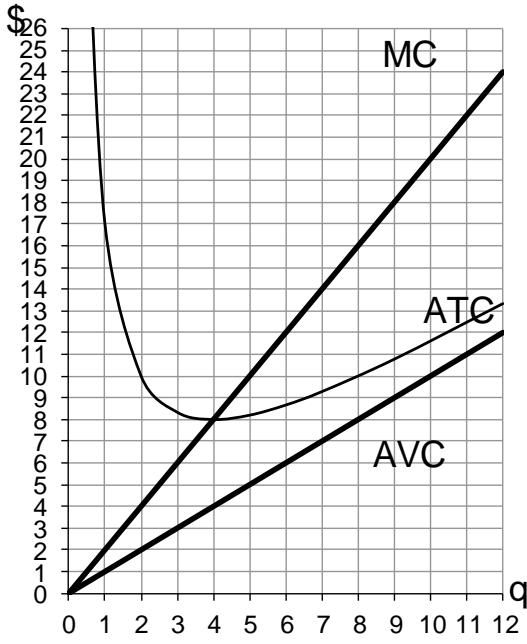
9. The above figure shows that
 - a) There is a negative externality, with a per unit cost of LN
 - b) There is a negative externality, with a per unit cost of AB
 - c) There is a positive externality, with a per unit benefit of AB
 - d) There is a positive externality, with a per unit benefit of HN
 - e) Both positive and negative externality are present, and the positive externality is larger than the negative externality

10. The policy that results in the socially efficient quantity is
 - a) a subsidy of IK.
 - b) a subsidy of LN.
 - c) a subsidy of LO.
 - d) a tax of FH.
 - e) a tax of LN.

11. What is the **change** in the amount of **total surplus** when the government intervenes with the policy that gets the market quantity to be the same as the socially efficient quantity
 - a) -ILN
 - b) ABKI
 - c) FIKH
 - d) FHI
 - e) -HIK

12. Under what assumptions will the long-run supply curve for the widget industry be perfectly elastic (i.e. perfectly flat)?
- (i) The same technology is available to all firms.
 - (ii) There are no barriers to entry in the industry.
 - (iii) The average total cost is constant (constant of scale) over the entire range of Q.
 - (iv) Input prices do not change as the industry expands
 - (v) The long-run demand curve is perfectly elastic.
- a) (i) and (ii)
 - b) (iii) and (iv)
 - c) (i), (ii), and (iv)
 - d) (ii), (iii), and (v)
 - e) (i), (ii), (iv), and (v)

Suppose the required assumptions from above hold for the widget industry. Each widget firm has the cost structure illustrated in the left graph below. The right graph illustrates two different possible demand curves, D1 and D2. Use the figures below for the next 7 questions:



13. Fixed cost equals
- a) 2
 - b) 4
 - c) 8
 - d) 16
 - e) 25
14. If the price equals 16, in the short run the firm will produce. The resulting maximum profit (in the short run) equals
- a) 6
 - b) 8
 - c) 36
 - d) 48
 - e) 64

For the next four questions, assume demand is D1 and the industry is in **long-run** equilibrium.

15. The price P^{LR} is
- a) 6
 - b) 8
 - c) 10
 - d) 12
 - e) 15
16. Long-run output per firm q^{LR} equals
- a) 2
 - b) 4
 - c) 5
 - d) 6
 - e) 8
17. Long-run industry quantity Q^{LR} equals
- a) 600
 - b) 900
 - c) 1200
 - d) 1500
 - e) 1800
18. Long-run number of firms N^{LR} equals
- a) 90
 - b) 150
 - c) 180
 - d) 200
 - e) 300
19. Suppose the industry is initially in long-run equilibrium at demand D1 and the number of firms equals the number in the previous question. Demand then shifts to D2. In the **short-run**, the equilibrium price will be
- a) 8
 - b) 12
 - c) 14
 - d) 18
 - e) 20

Name	Willingness to Pay
D1	2
D2	2
D3	2
D4	0

20. In MinnesotaLand, the willingness-to-pay for a stadium is given by the table above. Suppose that a football stadium is nonrivalrous in consumption and nonexcludable. It is socially efficient to build the football stadium if and only if the cost is no higher than
- 0
 - 2
 - 4
 - 6
 - 8

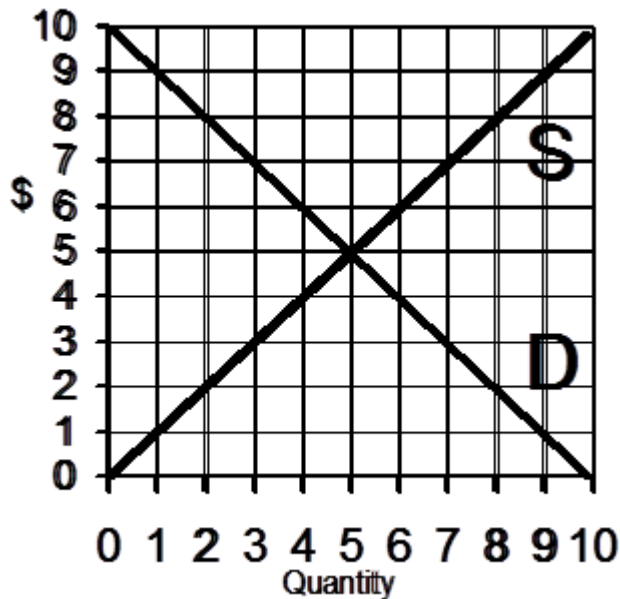
Refer to the following table for the next 3 questions

	Cheese	Post-its
Wisconsin	20 lbs cheese per hour	25 Post-its per hour
Minnesota	100 lbs cheese per hour	1000 Post-its per hour

21. _____ has the comparative advantage in cheese and _____ has the comparative advantage in post-its.
- Minnesota, Minnesota
 - Minnesota, Wisconsin
 - Wisconsin, Minnesota
 - Wisconsin, Wisconsin
22. The opportunity cost for Minnesota to make one more Post-its equals _____, and this equals the slope of the _____.
- 10 lbs cheese, indifference curve
 - 10 lbs cheese, production possibility frontier
 - 0.1 lbs cheese, indifference curve
 - 0.1 lbs cheese, production possibility frontier
23. Which of the following statements are true?
- Minnesota has an absolute advantage over Wisconsin in both Cheese and Post-its
 - The source of gains from trade between Minnesota and Wisconsin is that trade allows each to exploit increasing returns.
 - If Minnesota and Wisconsin decide to trade, both states will gain from trading.
- (i)
 - (i) and (ii)
 - (i) and (iii)
 - (ii) and (iii)
 - (i), (ii), and (iii)

24. Ricky and Kevin both consume bacon and eggs for breakfast every morning. Ricky only cares about “servings,” where one serving is one egg and two slices of bacon. Kevin cares about the total grams of protein he consumes, where one egg gives him 7 grams and one slice of bacon gives him 3 grams. Ricky’s preferences are _____ and Kevin’s preferences are _____
- Perfect substitutes, fixed proportions (perfect complements)
 - Decreasing marginal rate of substitution, perfect substitutes
 - Fixed proportions (perfect complements), perfect substitutes
 - Fixed proportions (perfect complements), decreasing marginal rate of substitution
 - Decreasing marginal rate of substitution, decreasing marginal rate of substitution
25. If the price of eggs falls, Ricky will purchase more eggs. This increase in demand is
- due entirely to a substitution effect
 - a combination of a substitution effect and an income effect
 - due entirely to an income effect
 - none of the above

Use the graph below for the next 6 questions:



The above graph illustrates the supply and demand for widgets in Econland. You can see that in autarky, the equilibrium price for a widget is \$5. Suppose Econland opens up to trade with the rest of the world, where the **world price** of widgets is **\$3 per widget**. Suppose that Econland is small relative to the rest of the world so that when it opens up to trade, it doesn’t change the world price.

26. What is the change in Econland total surplus from opening up to trade with the rest of the world?
- 0
 - 2
 - 4
 - 8
 - 12

27. What is the change in Econland's producer surplus from opening up to trade with the rest of the world?
- a) 0
 - b) -2
 - c) -4
 - d) -8
 - e) -12
28. Suppose that at the same time that Econland begins trading with the rest of the world, a tariff of \$1 per widget is imposed on imports in Econland. The total tariff revenue collected will equal
- a) 0
 - b) 1
 - c) 2
 - d) 4
 - e) 8
29. An import quota of quantity _____ would have the same effect on consumer surplus in Econland, as \$1 the tariff given above
- a) 1
 - b) 2
 - c) 3
 - d) 4
30. Suppose that at the same time that Econland begins trading with the rest of the world, a tariff of \$2 per widget is imposed on import in Econland. The total tariff revenue collected will equal
- a) 0
 - b) 1
 - c) 2
 - d) 4
 - e) 8
31. If the world price P^{World} were to fall to zero
- a) Econland would be better off with autarky
 - b) Econland consumer surplus would increase more than producer surplus would decrease
 - c) Econland consumer surplus would decrease more than producer surplus would increase
 - d) Econland consumer surplus and producer surplus would both increase
 - e) The gain in consumer surplus would exactly offset the decrease in producer surplus

32. Goldy consumes pizza and education. The price of pizza and education are both \$18 per unit. However, there is a university subsidy program where Goldy gets \$8 back for every pizza unit he purchases. Thus, net of the subsidy, his effective pizza price is \$10 per unit. Suppose that under this arrangement, he buys 20 units of pizza and 10 units of education. The program costs the university \$160 (= \$8 times 20 pizza units). Suppose the university is considering a new program that would just give \$160 cash to Goldy.
- If the government gives \$160 cash instead of the \$8 subsidy, then Goldy will increase his purchases to **more** than 20 units of pizza.
 - Goldy's consumption will remain at 20 units of pizza and 10 units of education, because this consumption bundle is on his budget constraint, and the budget constraint condition is all that needs to be checked for the consumer optimum.
 - If, on account of the change in program to a \$160 cash payment, Goldy ends up buying less than 20 units of pizza, then he will be better off under the new program.
 - None of the above.
33. The dirty shared kitchen is a common resource that gives rise to what is sometimes called the "Tragedy of the commons." This is because a clean shared kitchen is
- nonrivalrous in consumption and excludable.
 - nonrivalrous in consumption and nonexcludable.
 - rivalrous in consumption and excludable.
 - rivalrous in consumption and nonexcludable.
34. Which of the following statements about "increasing returns as a basis for trade" are true?
- This type of trade can explain why similar countries (such as the US and Canada) trade.
 - When this is the basis for trade, if trade does not occur then some goods with large fixed costs might not be produced.
 - This type of trade explains most of the trade between the U.S. and China.
- (i), (ii), (iii)
 - (i), (ii)
 - (ii), (iii)
 - (i)
35. Which of the following statements regarding "cap and trade" policies are true?
- It works like a "command and control" style policy because it imposes a cap at each individual plant, rather than a cap of total emissions across plants.
 - It has a similar economic impact similar to a tax on emissions, with the difference being that with a tax, the revenue goes to the government, but with "cap and trade," the equivalent of tax revenue goes to whomever is allocated emission allowances.
 - It has been adopted in the European Union as part of the carbon emissions policy.
 - It has been adopted in the United States as part of the carbon emissions policy.
- (i), (ii), (iii), (iv)
 - (i), (ii), (iii)
 - (ii), (iii)
 - (ii), (iii), (iv)
 - (i)