

Economics 2
Winter 2008

your name _____
your student i.d. _____

PRACTICE FINAL EXAM

DIRECTIONS: No calculators, books, or notes of any kind are allowed. All papers and notebooks must remain closed and on the floor at all times throughout the exam, and students are not allowed to leave the examination room until finished. Please do not turn in your exam before 9:00 a.m. Answer all questions in the space provided with the exam. Two hundred points are possible on this exam.

HINTS: Feel free to use the following formula if you find it useful.

$$\text{Area of a triangle} = (1/2) (\text{base}) (\text{height})$$

MULTIPLE CHOICE—circle the correct answer (4 points each, 168 points total)

- 1.) Which of the following best explains why, if there is perfect competition and no externalities, a subsidy results in an inefficient use of resources?
 - a.) when firms receive the subsidy, they only pass some of it along as a cost saving to consumers but take much of it simply in the form of increased profits
 - b.) as a result of the subsidy, the marginal benefit to some consumers of receiving the good is less than the marginal cost of producing the good
 - c.) the subsidy increases producer surplus, but decreases consumer surplus by more than the increase in producer surplus
 - d.) the government has a difficult time figuring out which firms have the greatest need of getting the subsidy

- 2.) If a single firm buys up all the firms that used to comprise a perfectly competitive industry so as to create a monopoly,
 - a.) producer surplus would go up and consumer surplus would go up
 - b.) producer surplus would go down and consumer surplus would go down
 - c.) producer surplus would go down and consumer surplus would go up
 - d.) producer surplus would go up and consumer surplus would go down

- 3.) Which of the following statements is accurate for a monopolist practicing perfect price discrimination?
 - a.) the marginal revenue of the Qth unit sold is greater than the price of the Qth unit sold
 - b.) the marginal revenue of the Qth unit sold is equal to the price of the Qth unit sold
 - c.) the marginal revenue of the Qth unit sold is less than the price of the Qth unit sold
 - d.) marginal revenue could be greater than or less than price depending on the elasticities

- 4.) What would happen in a natural monopoly if the producer set price equal to marginal cost?
 - a.) the firm would maximize profit
 - b.) the firm would earn negative profit
 - c.) no one could afford to buy the product
 - d.) the price would have to fall all the way to zero

- 5.) Which of the following is true of prisoner's dilemma?
- a.) if each player deviates from their dominant strategy they both would be better off
 - b.) there is no Nash equilibrium
 - c.) the Nash equilibrium is efficient
 - d.) the Nash equilibrium is equitable

Question 6 refers to an advertising game between Alice's company and Bonnie's company.

	Alice advertises	Alice doesn't advertise
Bonnie advertises	Alice gets 40 Bonnie gets 20	Alice gets 30 Bonnie gets 50
Bonnie doesn't advertise	Alice gets 30 Bonnie gets 30	Alice gets 50 Bonnie gets 60

- 6.) Which of the following statements is the Nash equilibrium for this game?
- a.) Alice gets 40 and Bonnie gets 20
 - b.) Alice gets 30 and Bonnie gets 50
 - c.) Alice gets 30 and Bonnie gets 30
 - d.) Alice gets 50 and Bonnie gets 60
- 7.) Which characteristic is associated with monopolistic competition?
- a.) collusion
 - b.) product differentiation
 - c.) small number of firms
 - d.) awareness of rival firms in the market
- 8.) In the dominant firm model of oligopoly,
- a.) the demand curve facing the dominant firm is the same as the demand curve of the entire market
 - b.) the demand curve facing the dominant firm equals the demand curve of the entire market minus the supply of the smaller firms
 - c.) the marginal revenue curve is kinked
 - d.) the marginal revenue curve has a gap
- 9.) The reason that a regulator of a natural monopoly might choose to use a two-part price structure is
- a.) to achieve the socially optimal level of output and still allow the firm to earn a profit
 - b.) regulatory capture
 - c.) it can only observe part of the firm's true costs
 - d.) in a natural monopoly, the market is naturally segmented into two parts

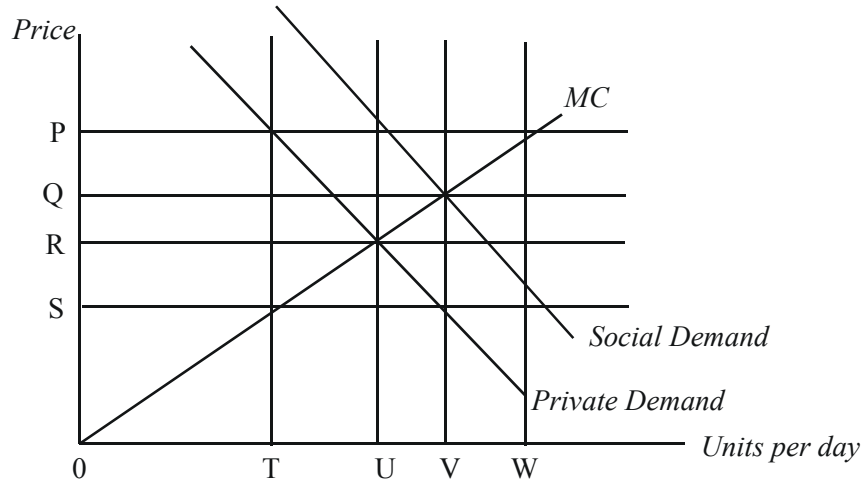
10.) Which of the following government agencies currently has some responsibility for making sure that the nation's antitrust laws are adhered to?

- a.) Interstate Commerce Commission
- b.) Sherman Antitrust Commission
- c.) Federal Trade Commission
- d.) none of the above

11.) The Coase Theorem refers to the possibility of internalizing a positive externality by using

- a.) a tax
- b.) a subsidy
- c.) privately negotiated side payments
- d.) government regulation

Questions 12 and 13 refer to the following diagram:



12.) The socially optimal level of production is given by the distance

- a.) OT
- b.) OU
- c.) OV
- d.) OW

13.) If the goal of policy is to maximize the sum of consumer surplus, producer surplus, and government surplus, then the policy should be

- a.) set the tax equal to QS and the subsidy equal to QS
- b.) set the tax equal to zero and the subsidy equal to zero
- c.) set the tax equal to zero and the subsidy equal to QS
- d.) set the tax equal to QS and the subsidy equal to zero

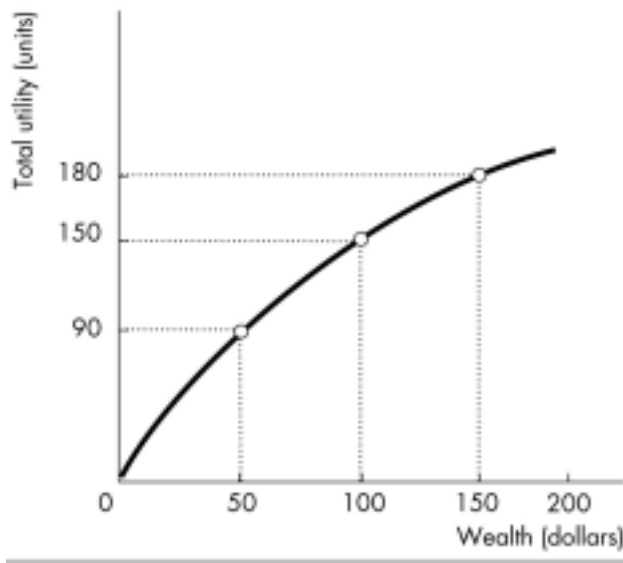
- 14.) How would you characterize the relation between the demand curve for a public good and the individual marginal willingness to pay curves?
- a.) the demand curve is the vertical summation of the individual marginal willingness to pay curves
 - b.) the demand curve is the horizontal summation of the individual marginal willingness to pay curves
 - c.) the demand curve is the average of the individual marginal willingness to pay curves
 - d.) there is no necessary relation between the demand curve and the individual marginal willingness to pay curves
- 15.) If the income-elasticity of demand for a public good exceeds 1, it makes sense to pay for it with a tax that is
- a.) progressive
 - b.) proportional
 - c.) regressive
 - d.) distortionary
- 16.) Logrolling refers to
- a.) the practice whereby legislators support each other's pork barrel spending
 - b.) the practice of introducing many similar bills hoping that one of the versions will become law
 - c.) a recreational activity of mountain men
 - d.) the practice of attaching a controversial bill to a large appropriations bill
- 17.) The amount by which a firm's revenues could go up if it hires one more worker is called the
- a.) marginal product
 - b.) average product
 - c.) marginal revenue product
 - d.) marginal cost
- 18.) When we have the number of workers hired on the horizontal axis, the marginal product of labor schedule is usually drawn as
- a.) an upward sloping function reflecting the principle of increasing returns
 - b.) a downward sloping function reflecting the principle of decreasing returns
 - c.) a downward sloping function reflecting the principle of increasing returns
 - d.) an upward sloping function reflecting the principle of decreasing returns
- 19.) If the marginal revenue product is bigger than the wage, that indicates that
- a.) the firm could increase profits by hiring more labor
 - b.) the firm could increase profits by hiring less labor
 - c.) the firm could increase profits by paying a higher wage
 - d.) the firm could increase profits by paying a lower wage
- 20.) In the market for labor, the demand function describes
- a.) the number of workers who are willing to work at each wage
 - b.) the output of workers who are paid a given wage
 - c.) the number of workers the firm is willing to hire at each wage
 - d.) the compensating wage differential

- 21.) In a perfectly competitive industry, the industry-wide labor demand curve
- a.) is given by the vertical summation of the MRP schedules for the individual firms in that industry
 - b.) is given by the horizontal summation of the MRP schedules for the individual firms in that industry
 - c.) is given by the average of the MRP schedules for the individual firms in that industry
 - d.) has no necessary relation to the MRP schedules for the individual firms in that industry
- 22.) For the labor supply curve for the economy as a whole,
- a.) the curve would be expected to slope up as a result of the income and substitution effects
 - b.) the curve would be expected to slope down as a result of the income and substitution effects
 - c.) the curve would be expected to slope down as a result of the income effect but slope up as a result of the substitution effect
 - d.) the curve would be expected to slope up as a result of the income effect but slope down as a result of the substitution effect
- 23.) Which of the following would result in an increase in the user cost of capital?
- a.) a decrease in the nominal interest rate
 - b.) a decrease in expected inflation
 - c.) a decrease in the depreciation rate
 - d.) none of the above
- 24.) The Hotelling principle for the price of an exhaustible natural resource predicts that
- a.) the quantity of the resource used each year should grow at the same rate as the overall economy
 - b.) the price of the resource should decline over time relative to the cost of other goods and services
 - c.) price minus marginal cost should rise at the rate of interest
 - d.) when global oil production actually starts to decline due to peak oil, the price of oil would be expected to double over a very short period of time
- 25.) Which of the following is not something that contributes to human capital?
- a.) the physical tools used by the worker
 - b.) the worker's IQ
 - c.) the worker's education
 - d.) the worker's previous experience with this kind of job
- 26.) Which of the following do you think might be the best explanation for the increase in wage inequality since 1970?
- a.) the gap between men and women has increased
 - b.) the gap between those with and without college education has increased
 - c.) the Gini coefficient on before-tax wages has gone down
 - d.) the Gini coefficient on after-tax wages has gone down

- 27.) Which of the following measures would you expect to see exhibit the most inequality across households in America today?
- a.) before-tax income for the household as a whole
 - b.) after-tax income for the household as a whole
 - c.) consumption spending by the household as a whole
 - d.) before-tax income per hour worked by household members
- 28.) There are 10 people living on the island of Brastonia, but all of the coconuts are owned by one person (who calls himself the King of Brastonia). The Gini coefficient for the Brastonian distribution of coconuts would be
- a.) 10
 - b.) 1
 - c.) 0.1
 - d.) 0
- 29.) If rich people pay a higher dollar amount of taxes than poor people, the tax system would be described as
- a.) progressive
 - b.) regressive
 - c.) proportional
 - d.) it cannot be determined from the information given
- 30.) Economic theory suggests that the primary reason that some workers are paid a higher wage than others is
- a.) people working at different jobs have a different marginal revenue product
 - b.) pure discrimination has been entrenched in the society for so long that it is very hard to change
 - c.) some jobs have a tradition of paying a higher wage and these traditions are slow to change
 - d.) economic theory in fact does not offer a good explanation of why wages are so different
- 31.) Which of the following is the best explanation of how technological progress may have affected income inequality in the United States?
- a.) technological progress has increased the demand for high-skilled labor
 - b.) technological progress has decreased the demand for high-skilled labor
 - c.) technological progress has increased the supply of low-skilled labor
 - d.) technological progress has decreased the supply of low-skilled labor
- 32.) The lemons model could be used to illustrate
- a.) the commitment problem
 - b.) private information
 - c.) the principle of harvesting low-hanging fruit first
 - d.) the health benefits of citrus products
- 33.) If the only people who buy health insurance are the ones who are already sick, it would be an example of
- a.) adverse selection
 - b.) moral hazard
 - c.) the free rider problem
 - d.) prisoner's dilemma

- 34.) Consider a gamble where you receive \$100 if a flipped coin comes up heads whereas you pay \$80 if the coin comes up tails. Which of the following statements is correct?
- a.) both a risk neutral person and a risk averse person would certainly take the gamble
 - b.) both a risk neutral person and a risk averse person might not take the gamble
 - c.) a risk neutral person would certainly take the gamble whereas a risk averse person might not take the gamble
 - d.) a risk averse person would certainly take the gamble whereas a risk neutral person might not take the gamble
- 35.) The tendency for loan originators who sell off the loan to make riskier loans than would a bank who holds onto the loan would be described as
- a.) moral hazard
 - b.) statistical discrimination
 - c.) adverse selection
 - d.) the problem of credible commitment
- 36.) The implication of the market for lemons model is that
- a.) used cars that are for sale are of a lower average quality than used cars of the same model, make, and year that are not for sale
 - b.) the equilibrium is one in which buyers of used cars are always surprised at how bad the cars turn out to be
 - c.) the equilibrium is one in which sellers of used cars are always surprised that customers are unwilling to pay what the car is actually worth
 - d.) the equilibrium is one in which sellers of used cars advertise in order to send a costly signal that the used car they are selling is of high quality

Questions 37-38 refer to the following diagram of Nancy's utility function.



37.) Nancy has a choice between two options. Option X gives Nancy \$100 for sure. Option Y gives Nancy \$50 half the time and \$150 half the time. Nancy's expected utility of option X

- a.) is greater than the expected utility of option Y
- b.) is the same as the expected utility of option Y
- c.) is less than the expected utility of option Y
- d.) could be either greater or less than the expected utility of option Y

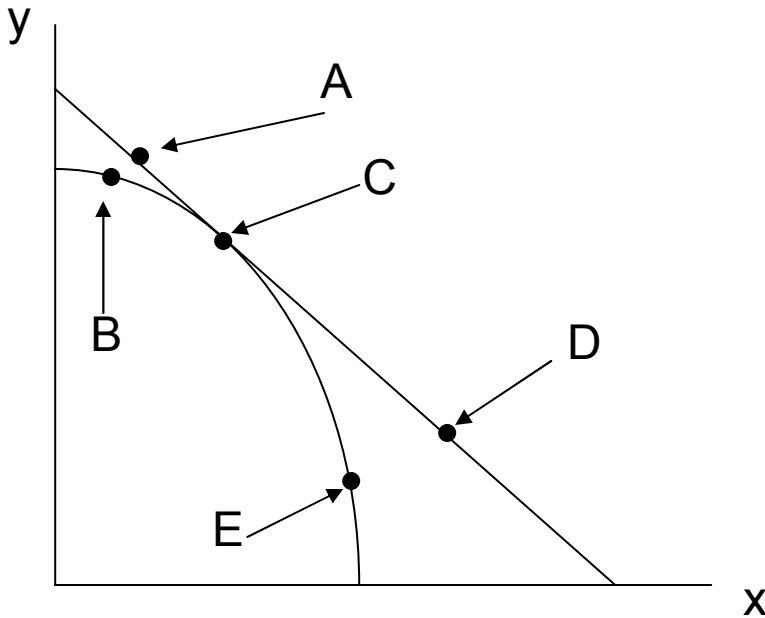
38.) Now suppose Nancy is faced with a risky proposition which yields an income of \$50 one-third of the time, \$100 one-third of the time, and \$150 one-third of the time. Her expected utility is

- a.) 100
- b.) 140
- c.) 150
- d.) 420

39.) Which of the following is correct?

- a.) Both imports and exports include goods and services
- b.) Imports includes both goods and services but exports includes only goods
- c.) Imports includes only goods but exports includes both goods and services
- d.) Both exports and imports include goods and neither includes services

Questions 40 and 41 refer to the following diagram, which shows a country's production possibilities frontier between two goods, x and y . In answering these questions, you should assume that the world relative price of good x , that is, the number of units of good y you'd have to give up on the world market to get one more unit of good x , is greater than the relative price of good x that we would observe under autarky, and that this world relative price corresponds to the slope of the line passing through points ACD.



40.) Under autarky, this economy might be producing at the point

- a.) A
- b.) B
- c.) C
- d.) D
- e.) E

41.) Under free trade, this economy might be producing at the point

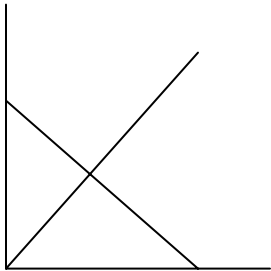
- a.) A
- b.) B
- c.) C
- d.) D
- e.) E

42.) A major purpose of tariffs is to

- a.) encourage imports
- b.) encourage exports
- c.) discourage imports
- d.) discourage exports

PART II: FILL IN THE BLANK (32 points total)—credit for correct answer only (no partial credit)

Question 43 (8 points total) refers to the following diagram of supply and demand in a factor market.

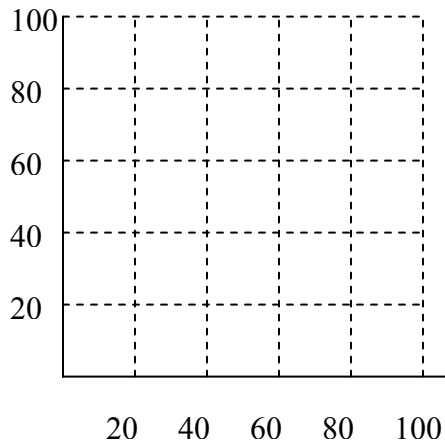


- a.) (4 points) Draw and label the opportunity cost of this factor
- b.) (4 points) Draw and label the economic rent to this factor

Question 44 refers to the following data, which show approximate money income shares in the United States in 1967

Households	Money income (percent of total)
lowest 20%	4
second 20%	11
third 20%	17
fourth 20%	24
highest 20%	44

In the space below, plot the Lorenz curve for the data above. Be sure to label the axes. (12 points total)



45.) (12 points total) Tarzan and Jane are the sole inhabitants of their jungle kingdom. Jane can produce 6 apples or 2 bananas each day while Tarzan can produce 20 apples or 10 bananas each day.

a.) (3 points) Who has the absolute advantage producing bananas? _____

b.) (3 points) Who has the comparative advantage producing bananas? _____

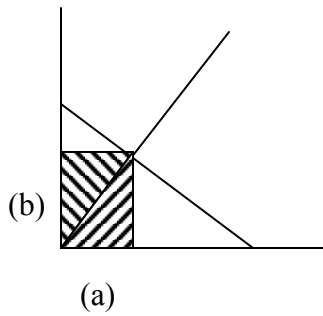
c.) (3 points) What is Jane's opportunity cost of producing 1 banana? _____

d.) (3 points) Suppose that the jungle kingdom can trade apples and bananas with monkeys. The monkeys are willing to trade as many apples or bananas that Tarzan and Jane might like at the relative price of 5 apples for 2 bananas. How many bananas will Tarzan and Jane put together produce in a day in order to take advantage of this opportunity for trade? _____

Answers.

1b 2d 3b 4b 5a 6d 7b 8b 9a 10c 11c 12c 13c 14a 15a 16a 17c 18b 19a 20c 21b 22c
23b 24c 25a 26b 27a 28b 29d 30a 31a 32b 33a 34c 35a 36a 37a 38b 39a 40b 41c 42c

43



44.) horizontal axis: cumulative percentage of households
vertical axis: cumulative percentage of income
points on curve (horizontal coordinate listed first):
(0,0), (20,4), (40,15), (60,32), (80,56), (100,100)

45.) (a) Tarzan (b) Tarzan (c) 3 apples (d) 10 bananas