

Economics 2
Fall 2011

your name _____
your student i.d. _____

PRACTICE FINAL EXAM B

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 4:00 p.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 formulas if you find them useful.

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

$$\text{Area of a trapezoid} = (1/2)(\text{base1} + \text{base2})(\text{height})$$

MULTIPLE CHOICE—circle the correct answer (4 points each, 180 points total)

- 1.) The U.S. social security tax specifies that the worker and the firm each must make a contribution to social security. If the labor supply curve slopes up and the labor demand curve slopes down, then standard economic theory predicts that decreasing the amount the employer is required to contribute would result in
 - a.) an increase in the after-tax wage received by the worker
 - b.) a decrease in the after-tax wage received by the worker
 - c.) no change in the after-tax wage received by the worker
 - d.) an unclear effect on the after-tax wage received by the worker

- 2.) How would you compare the level of output produced by a standard monopolist (who must charge the same price to each customer) with that for a perfectly price-discriminating monopolist?
 - a.) output is higher for the price-discriminating monopolist
 - b.) output is higher for the standard monopolist
 - c.) output is the same in either case
 - d.) the answer depends on whether the marginal cost curve is horizontal or upward-sloping

- 3.) In a natural monopoly,
 - a.) average costs rise as the level of output goes up
 - b.) average costs rise as the level of output goes down
 - c.) average costs do not depend on the level of output
 - d.) average cost is always below the marginal cost

- 4.) Which of the following is true under monopolistic competition?
 - a.) different firms produce the identical product
 - b.) there are no barriers to entry
 - c.) the demand curve facing an individual firm is horizontal
 - d.) consumer surplus is zero

Questions 5 and 6 refer to an advertising game between Alice's company and Bonnie's company.

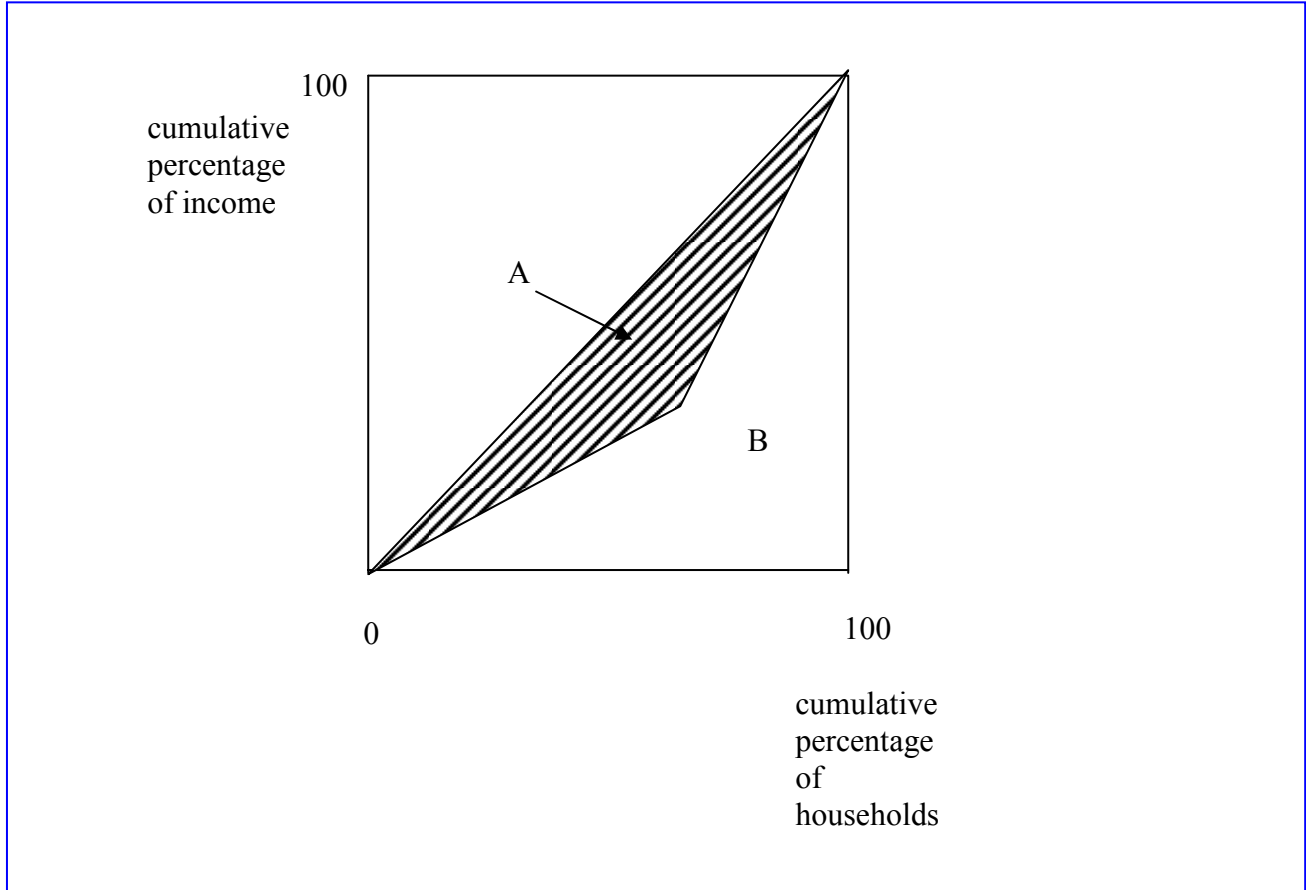
	Alice advertises	Alice doesn't advertise
Bonnie advertises	Alice gets 10 Bonnie gets 30	Alice gets 20 Bonnie gets 10
Bonnie doesn't advertise	Alice gets 20 Bonnie gets 20	Alice gets 30 Bonnie gets 20

- 5.) Which of the following statements is correct?
- Alice has a dominant strategy and Bonnie has a dominant strategy
 - Alice has a dominant strategy and Bonnie does not have a dominant strategy
 - Alice does not have a dominant strategy and Bonnie has a dominant strategy
 - Alice does not have a dominant strategy and Bonnie does not have a dominant strategy
- 6.) How would you characterize the Nash equilibrium for this game?
- Alice gets 10, Bonnie gets 30
 - Alice gets 20, Bonnie gets 10
 - Alice gets 20, Bonnie gets 20
 - Alice gets 30, Bonnie gets 20
- 7.) If production of a good imposes an external cost, then
- the government should consider taxing the good in order to increase the quantity that gets produced
 - the government should consider subsidizing the good in order to decrease the quantity that gets produced
 - the government should consider subsidizing the good in order to increase the quantity that gets produced
 - the government should consider taxing the good in order to decrease the quantity that gets produced
- 8.) The Coase Theorem does not apply in the case of dealing with air pollution because
- the Coase Theorem applies to external benefits but not external costs
 - the Coase Theorem applies to external costs but not external benefits
 - the Coase Theorem does not apply to either external costs or external benefits
 - it is not feasible for each producer of air pollution to compensate each individual who is affected by air pollution
- 9.) The Tragedy of the Commons predicts that
- a privately-owned resource will be overutilized
 - a privately-owned resource will be underutilized
 - a commonly-owned resource will be overutilized
 - a commonly-owned resource will be underutilized

- 10.) The main argument in favor of giving companies tradable permits that allow them to emit a certain amount of sulfur oxides is
- a.) it lets firms with the lowest marginal cost of reducing pollution do the most polluting
 - b.) it lets firms with the highest marginal cost of reducing pollution do the most polluting
 - c.) it allows the market to calculate the optimal total level of sulfur oxide emissions
 - d.) it is difficult to construct any economic argument why tradable permits should be used
- 11.) The socially optimal tax per unit would be equal to
- a.) marginal private benefit minus marginal social benefit
 - b.) marginal social benefit minus marginal private benefit
 - c.) marginal social cost minus marginal private cost
 - d.) marginal private cost minus marginal social cost
- 12.) The reason that a warranty on a used car communicates credible information is
- a.) the warranty is certified by the used car dealers association
 - b.) the warranty is certified by the Federal Trade Commission
 - c.) it would cost the seller too much to honor the warranty if the car is a lemon
 - d.) if the seller of the car has lied to you then you can use the warranty to sue them in small-claims court
- 14.) The standard economic assumption is that firms will try to
- a.) minimize marginal product
 - b.) maximize marginal product
 - c.) minimize average labor costs
 - d.) equate marginal costs of hiring labor with marginal benefits
- 15.) In a competitive industry, the industry-wide labor demand curve
- a.) is the vertical summation of the VMP schedules for each firm in the industry
 - b.) is the horizontal summation of the VMP schedules for each firm in the industry
 - c.) is exactly equal to the VMP schedule for each firm in the industry
 - d.) has no relation to the VMP schedule for each firm in the industry
- 16.) The reason we might draw the labor supply curve for an individual firm as horizontal and the labor supply curve for the industry as a whole as sloping up is
- a.) a big change on the horizontal axis for the firm is a tiny change on the horizontal axis for the industry
 - b.) the substitution effect is operating at the level of the firm but not at the level of the industry
 - c.) the income effect is operating at the level of the firm but not at the level of the industry
 - d.) the value of marginal product matters at the level of the firm but not at the level of the industry

- 17.) The reason we might draw the labor supply curve for an industry as sloping up and the labor supply curve for the economy as a whole as vertical is
- a.) a big change on the horizontal axis for the industry is a tiny change on the horizontal axis for the whole economy
 - b.) for an industry labor supply curve we hold wages in other industries as fixed whereas for the economy-wide labor supply curve all wages change
 - c.) the income effect is operating at the level of the industry but not at the level of the whole economy
 - d.) the value of marginal product matters at the level of the industry but not at the level of the whole economy
- 18.) If unions succeed in negotiating a wage for unionized workers that is higher than those workers' value of marginal product, then economic theory predicts that
- a.) the number of employed union workers would rise and the wage paid to non-union workers would rise
 - b.) the number of employed union workers would fall and the wage paid to non-union workers would fall
 - c.) the number of employed union workers would fall and the wage paid to non-union workers would rise
 - d.) the number of employed union workers would rise and the wage paid to non-union workers would fall
- 19.) An increase in the minimum wage would
- a.) increase the surplus for those workers who retain their minimum-wage jobs and increase total economic surplus
 - b.) decrease the surplus for those workers who retain their minimum-wage jobs and decrease total economic surplus
 - c.) decrease the surplus for those workers who retain their minimum-wage jobs and increase total economic surplus
 - d.) increase the surplus for those workers who retain their minimum-wage jobs and decrease total economic surplus
- 20.) In the United States, the poorest 20% of the households earn about
- a.) 25% of total income
 - b.) 20% of total income
 - c.) 15% of total income
 - d.) 4% of total income
- 21.) In the United States, the richest 20% of households
- a.) have more than 20% of the people and perform more than 20% of the total hours worked
 - b.) have less than 20% of the people and perform less than 20% of the total hours worked
 - c.) have less than 20% of the people and perform more than 20% of the total hours worked
 - d.) have more than 20% of the people and perform less than 20% of the total hours worked

Question 22 refers to the following diagram, in which the cumulative percentage of households is plotted on the horizontal axis and the cumulative percentage of income earned by those households is plotted on the vertical axis. The symbol A refers to the total area of the shaded region, and the symbol B refers to the total area below the shaded region.



22.) The Gini coefficient can be calculated as

- a.) A
- b.) B
- c.) $A/(A+B)$
- d.) $B - A$

23.) In which of the following countries is the Gini coefficient lowest?

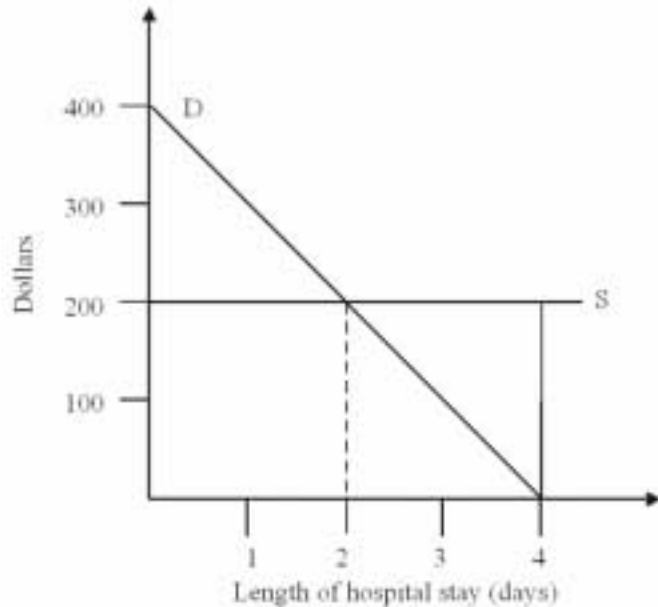
- a.) Canada
- b.) United States
- c.) Mexico
- d.) Brazil

24.) Which of the following is not likely to be a factor in the increased premium in the earnings of college-educated workers relative to the earnings of those without a college education?

- a.) skill-based technological progress
- b.) increased immigration
- c.) increased globalization
- d.) increase in the gap between earnings of men and women

- 25.) A means-tested welfare program is one which
- in order to qualify, one must have the means
 - the size of the payment reflects the mean value of consumption based on family size
 - in order to qualify, one must show that one means to find a job
 - the more income one earns, the smaller the size of the benefit
- 26.) The goal of a negative income tax system is to
- increase the total taxes paid
 - decrease the total taxes paid
 - increase the marginal tax rate
 - decrease the marginal tax rate
- 27.) Suppose that there is perfect competition in the labor market, workers are well informed about workplace risks, and workers care only about the absolute level of income they receive rather than their income relative to other workers. Under these conditions, if there is no government supervision of workplace safety, then economic theory would predict that
- workers will take more risks on the job than is economically optimal
 - workers will take some risks on the job, but these risks are economically optimal
 - workers will take less risks on the job than is economically optimal
 - risks on the job would be eliminated altogether by competitive forces
- 28.) The Occupational Safety and Health Administration (OSHA) was established in 1970. The number of workplace fatalities per 100,000 workers in the U.S.
- was rising before the establishment of OSHA and has been rising since the establishment of OSHA
 - was falling before the establishment of OSHA and has been falling since the establishment of OSHA
 - was falling before the establishment of OSHA and has been rising since the establishment of OSHA
 - was rising before the establishment of OSHA and has been falling since the establishment of OSHA
- 29.) Over the last 40 years, medical expenditures as a share of total GDP
- have been rising in the U.S. and rising in other developed countries
 - have been relatively constant in the U.S. and relatively constant in other developed countries
 - have been relatively constant in the U.S. and rising in other developed countries
 - have been rising in the U.S. and relatively constant in other developed countries
- 30.) Over the last 40 years, life expectancy
- has been rising in the U.S. and rising in other developed countries
 - has been relatively constant in the U.S. and relatively constant in other developed countries
 - has been relatively constant in the U.S. and rising in other developed countries
 - has been rising in the U.S. and relatively constant in other developed countries

Questions 31 and 32 refer to the following diagram, in which the number of days that a patient stays in the hospital is indicated on the horizontal axis, and the marginal benefit of another day in the hospital is plotted on the vertical axis as the line labeled D. The marginal cost of staying in the hospital is \$200 per day.



31.) If the patient's insurance pays all the costs and the patient gets to decide how many days to stay in the hospital, how many days will the patient stay?

- a.) 1
- b.) 2
- c.) 3
- d.) 4

32.) Suppose instead that the patient must pay the first \$400 of the costs, and after that the insurance company will pay the rest. If the patient gets to decide to stay in the hospital, how many days will the patient stay?

- a.) 1
- b.) 2
- c.) 3
- d.) 4

33.) The Manning, et. al. health insurance experiment found that when an insurance policy required families to pay the first \$1,000 of medical costs on their own, the result was

- a.) total health expenditures decreased significantly and the rates of serious medical problems increased significantly
- b.) total health expenditures did not decrease significantly and the rates of serious medical problems did not increase significantly
- c.) total health expenditures did not decrease significantly and the rates of serious medical problems increased significantly
- d.) total health expenditures decreased significantly and the rates of serious medical problems did not increase significantly

- 34.) Which of the following is not a benefit that is usually claimed for managed health-care plans?
- a.) they give the third-party payer more direct control over which medical services get provided
 - b.) they put pressure on care providers to reduce wasteful expenditures
 - c.) they allow the patient to receive the medical services that the patient believes are necessary
 - d.) people who switch to HMOs pay less for their health plans than those who stick with conventional health insurance
- 35.) When one compares the wages of individuals who work at risky jobs with the wages of individuals who work at safe jobs, if other characteristics of the individual such as education, race, and gender are the same, studies have found that
- a.) the wages for the riskier jobs are lower, suggesting that there is substantial exploitation of workers from unsafe working conditions
 - b.) the wages for the riskier jobs are about the same, suggesting that workers are poorly informed about the risks they are taking
 - c.) the wages for the riskier jobs are very slightly higher, suggesting that the market values a statistical life at about \$2,500
 - d.) the wages for the riskier jobs are significantly higher, suggesting that the market values a statistical life at about \$5,000,000
- 36.) If the goal is to guarantee adequate health care for everyone regardless of their ability to pay, the strategy most likely to achieve that goal would be
- a.) eliminate tax deductibility of employer-provided health insurance
 - b.) increase the patient co-pay on insurance plans
 - c.) make increased use of health maintenance organizations
 - d.) government-provided health care
- 37.) Which of the following statements is true of medical insurance compared with a medical-expenditure-assistance program for a health condition you know about before you get the insurance or the assistance?
- a.) a pure health insurance program would cover pre-existing conditions and a pure expenditure-assistance program would cover pre-existing conditions
 - b.) a pure health insurance program would not cover pre-existing conditions and a pure expenditure-assistance program would not cover pre-existing conditions
 - c.) a pure health insurance program would not cover pre-existing conditions and a pure expenditure-assistance program would cover pre-existing conditions
 - d.) a pure health insurance program would cover pre-existing conditions and a pure expenditure-assistance program would not cover pre-existing conditions
- 38.) Which of the following terms would you use to characterize fish in ocean waters?
- a.) rival and excludable
 - b.) nonrival and nonexcludable
 - c.) nonrival and excludable
 - d.) rival and nonexcludable
- 39.) Which of the following terms would you use to characterize automobiles?
- a.) private good
 - b.) public good
 - c.) commons good
 - d.) collective good

- 40.) Which of the following is the best characterization of public and private goods?
- a.) for a private good, the total demand curve is the vertical summation of the individual demand curves, and for a public good, the total demand curve is the vertical summation of the individual demand curves
 - b.) for a private good, the total demand curve is the horizontal summation of the individual demand curves, and for a public good, the total demand curve is the horizontal summation of the individual demand curves
 - c.) for a private good, the total demand curve is the horizontal summation of the individual demand curves, and for a public good, the total demand curve is the vertical summation of the individual demand curves
 - d.) for a private good, the total demand curve is the vertical summation of the individual demand curves, and for a public good, the total demand curve is the horizontal summation of the individual demand curves
- 41.) Private gated communities represent an example of changing security protection from
- a.) a public good to a private good
 - b.) a public good to a collective good
 - c.) a public good to a commons good
 - d.) none of the above
- 42.) Privately-owned commercial radio stations are an example of
- a.) private firms producing a public good
 - b.) public firms producing a private good
 - c.) private firms producing a collective good
 - d.) private firms producing a commons good
- 43.) When the cable company scrambles the signal it sends so that only households who pay can receive a particular broadcast, the effect is to make the good
- a.) rival and excludable
 - b.) nonrival and nonexcludable
 - c.) nonrival and excludable
 - d.) rival and nonexcludable
- 44.) Pork barrel spending and logrolling result in
- a.) inefficiently large government spending
 - b.) the largest net benefit for society
 - c.) the quick termination of projects that are wasteful or irrelevant
 - d.) under provision of public goods
- 45.) The income-elasticity of willingness to pay for public goods appears to be
- a.) greater than one, which suggests raising the revenue to pay for the goods with a progressive tax
 - b.) less than one, which suggests raising the revenue to pay for the goods with a regressive tax
 - c.) less than one, which suggests raising the revenue to pay for the goods with a progressive tax
 - d.) greater than one, which suggests raising the revenue to pay for the goods with a regressive tax

PART II: FILL IN THE BLANK (20 points total)—credit for correct answer only (no partial credit)

46.) (8 points total) Suppose you are considering a bet with the following probabilities:

- the probability is 0.3 of losing \$2
- the probability is 0.2 of winning \$1
- the probability is 0.5 of winning \$4

a.) (4 points) Calculate the expected value of the bet

b.) (2 points) To be allowed to take this bet, would a risk-neutral person be willing to pay more than the amount you specified in (a), less than the amount you specified in (a), or exactly the amount you specified in (a)?

c.) (2 points) To be allowed to take this bet, would a risk-averse person be willing to pay more than the amount you specified in (a), less than the amount you specified in (a), or exactly the amount you specified in (a)?

47.) (4 points each, 12 points total) Margarita owns a (very) small strawberry farm. The total number of strawberries she can produce depends on the total number of hours of labor she hires, according to the schedule below:

total labor hired (in hours)	total strawberries produced (in pounds)
0	0
1	5
2	9
3	11
4	12

Margarita can sell all the strawberries that her little farm produces at a price of \$3/pound.

a.) (4 points) What would be the marginal product of the second hour of labor hired?

b.) (4 points) What would be the value of marginal product of the third hour of labor hired?

c.) (4 points) Suppose that Margarita must pay a wage of \$5 per hour and that the number of hours of labor she hires has to be an integer (that is, she can hire 0, 1, 2, 3, or 4 hours, but not a number like 2.5 hours). How many hours of labor would Margarita want to hire?

Answers:

1a 2a 3b 4b 5b 6d 7d 8d 9c 10b 11c 12c 13 no question 14d 15b 16a
17b 18b 19d 20d 21a 22c 23a 24d 25d 26d 27b 28b 29a 30a
31d 32d 33d 34c 35d 36d 37c 38d 39a 40c 41b 42a 43c 44a 45a
46a 1.6 b same c less 47a 4 b 6 c 3