

Name _____

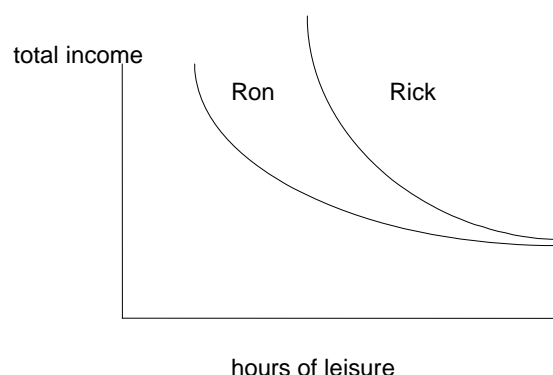
ECO361: LABOR ECONOMICS
SECOND MIDTERM EXAMINATION

NOVEMBER 10, 2009
Prof. Bill Even

DIRECTIONS.

The exam contains a mix of short answer and essay questions. Your answers to the 20 short answer portion of the exam (3 points each) should be listed on the answer sheet attached to the end of the exam. No credit will be given for answers placed elsewhere. Your answers to the essays (40 points total) should be placed in order in the blue book provided.

Consider the two indifference curves drawn below representing the preferences of Rick and Ron.



1. Given the indifference curves, it would be correct to conclude that:
 - a. For any given number of leisure hours, Rick is willing to give up an hour of leisure for less additional money than Ron.
 - b. Rick has a higher reservation wage rate than Ron
 - c. Rick has a higher wage rate than Ron
 - d. all of the above.

2. According to labor supply theory, if a worker's wage rate rises, she will
 - a. definitely work more hours
 - b. definitely work less hours
 - c. work less hours only if the income effect dominates the substitution effect.
 - d. work less hours only if the substitution effect dominates the income effect.

3. According to labor supply theory, the income effect of a wage increase will lead to:
 - a. a larger reduction in hours worked if the person was working many hours originally.
 - b. a larger reduction in hours worked if the person was working few hours originally.
 - c. a larger increase in hours worked if the person was working many hours originally.
 - d. a larger increase in hours worked if the person was working few hours originally.

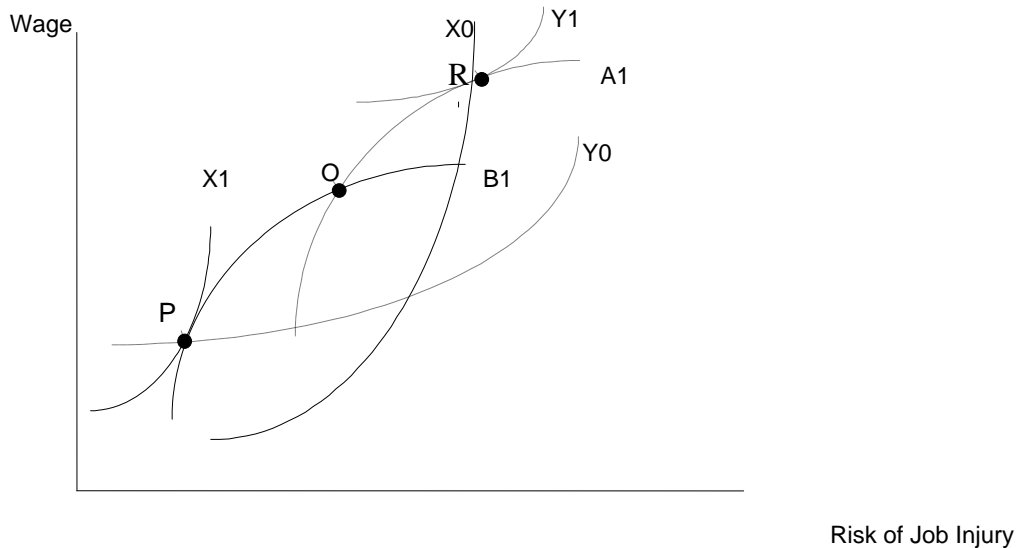
4. If a person unexpectedly receives a large inheritance from a relative, labor supply theory suggests that
 - a. the person would work fewer hours because of the income effect of the inheritance.
 - b. the person would work fewer hours because of the substitution effect of the inheritance.
 - c. the person would work more hours if the substitution effect was greater than the income effect
 - d. all of the above.

5. The Social Security system used to apply an earnings test to people beyond age 65 who collected Social Security benefits. The earnings test reduced Social Security benefits by \$.33 for every dollar earned above \$17,000. In 2000, the earnings test was eliminated for workers over age 65. Suppose that prior to 2000 when the earnings test was still in place, John was earning \$17,000 from his job and collecting Social Security. Elimination of the earnings test would lead to
- an ambiguous effect on John's work hours since the income effect would cause him to work more but the substitution effect would cause him to work less.
 - an ambiguous effect on John's work hours since the income effect would cause him to work less but the substitution effect would cause him to work more.
 - an increase in John's work hours since the substitution effect would cause him to work more and there is no income effect.
 - no effect on John's work hours since there would be no substitution or income effect.

To answer the next 4 questions, suppose that a defined benefit plan provides an annuity at retirement equal to 2 percent * years of service * final salary. Meghan started with the firm at age 30 and would have 30 years of service if she retires at 60. If she retires at age 60, she would receive 60% of her final salary annually and would expect to collect for 20 years since her life expectancy is 80. Assume that Meghan's salary is \$50,000 regardless of her age at retirement.

6. Assuming a zero interest rate, for the pension to be actuarially fair, it would have to increase the annual benefit by \$_____ for postponing retirement from age 60 to age 61.
7. Assuming a zero interest rate, if Meghan postpones retirement from age 60 to 61, the present value of her pension benefits would (*rise, fall*) by \$_____.
8. Other things being the same, Meghan's incentive to postpone retirement from age 60 to 61 would be greater if either interest rates _____ or her life expectancy _____.
- rise; rises.
 - rise; falls.
 - fall; rises.
 - fall; falls.
9. Suppose the pension system suddenly changes the rules so that, beyond 30 years of service, a worker receives an extra 2.5% per year of service instead of 2.0%. If Meghan was originally planning on retiring at age 61 with 31 years of service, this new rule would create
- a wealth effect that leads Meghan to retire sooner and a substitution effect that leads Meghan to retire later.
 - a wealth effect that leads Meghan to retire sooner, but no substitution effect
 - no wealth effect, but the substitution effect would lead Meghan to retire later.
 - both a wealth and substitution effect that lead Meghan to retire later.
10. The current Social Security system
- replaces a larger share of income at retirement for low income workers than for high income workers.
 - has gradually been increasing the normal retirement age from 65 to 67.
 - is financed by a payroll tax that applies to earned income, but the tax applies to earnings only below a "cap"
 - all of the above.

To answer the next 5 questions, refer to the diagram drawn below. The indifference curves for worker types X and Y are given by X_0, X_1 and Y_0, Y_1 . The iso-profit curves for firm types A and B are given by A_1 and B_1 .



11. In the above diagram, if a type X worker was given the opportunity to choose between points P, O, and R, he would be happiest with _____.
 - a. P
 - b. O
 - c. R

12. In the above diagram, if a type Y worker was given the opportunity to choose between points P, O, and R, she would be happiest with:
 - a. P
 - b. O
 - c. R

13. In the above diagram, if a type B firm could choose between points P, O, and R, its profits would be lowest at:
 - a. P
 - b. O
 - c. R

14. Based on the diagram above, one can conclude that
 - a. type X workers are more averse to risk than type Y workers
 - b. the cost of reducing risk is lower for type A firms than type B firms
 - c. the cost of reducing risk is lower for type B firms than type A firms
 - d. both a and b
 - e. both a and c

15. Based on the above diagram, we should expect that the equilibrium sorting in the labor market will result in:
 - a. X workers earning higher wages than Y workers
 - b. X workers matching with type A firms
 - c. X workers have less risky jobs than Y workers
 - d. all of the above.

16. Suppose that an economist estimates that the “statistical value of a life” is \$10 million. If this is true, what is the annual value of the the compensating difference that a worker should require for an additional .001 risk of death per year? (Round your answer to the nearest dollar.)

17. If the federal government increases the generosity of disability coverage that a worker receives if injured on the job, we should expect that wages on risky jobs

- a. would fall, but not as much as wages fall on safe jobs
- b. would fall more than wages fall on safe jobs
- c. would rise more than wages rise on safe jobs
- d. would rise less than wages rise on safe jobs

18. In class, we discussed the impact of commuting time on labor supply. Based on that theory, an improvement in the transportation system that reduces commuting costs would likely:

- a. cause more married women to work, and cause their husbands to work fewer hours per week.
- b. cause more married women to work, and cause their husbands to work more hours per week.
- c. cause fewer married women to work and cause their husbands to work more hours per week.
- d. cause fewer married women to work and cause their husbands to work fewer hours per week.

19. When the average difference of earnings between college graduates and high school graduates is used to estimate the “return” to a college degree, an economist would argue that the estimated return would be:

- a. biased upward if more able workers are more likely to go to college.
- b. biased downward if earnings differences don't account for the fact that college graduates generally have more generous fringe benefit packages than high school graduates.
- c. biased downward if the jobs that high school graduates accept typically have less desirable non-pecuniary features than the jobs that college graduates accept.
- d. all of the above.
- e. only a and b.

20. Other things being the same, the internal rate of return on acquiring a college education (net of taxes) would decrease if:

- a. the expected age of retirement rises.
- b. college tuition falls.
- c. the income tax system becomes more progressive
- d. none of the above.

Answer 2 of the next 3 questions (10 points each)

1. Suppose that a large law firm employs a combination of lawyers, paralegals, secretaries and custodians. Briefly describe “nondiscrimination laws” for fringe benefits and explain how their existence could create an incentive for the law firm to
 - a. purchase custodial services from another company instead of hiring their own custodians.
 - b. hire secretaries for part-time work instead of full-time work.

2. One of the most dangerous jobs in the U.S. today is driving a cab in high crime cities. There are a significant number of shootings associated with robbery of cab drivers that end with fatalities. The risk of fatality can be reduced with installation of bulletproof glass between the front and rear seats and the outside windows. Suppose that the city council has been outraged by a recent spike in the murder rate of cab drivers and decides to mandate that all cabs be equipped with bullet proof glass.
 - a. Using the concepts developed in class, explain how such a mandate would affect
 - i. cab drivers (assume the cab drivers are employees, not owners of the cabs);
 - ii. cab owners
 - iii. cab consumers
 - b. Other than the three groups list in (a) and their families, can anyone else benefit from the mandate? Explain.

3. Over 90% of registered nurses are female. Over 85% of engineers are male. Assuming that men and women are equally able to acquire the skills for either of these professions, discuss the reasons that so many women may enter nursing, but so few enter engineering. To receive full credit, you should discuss the main issues covered in class that relate to gender differences in the choice of college major.

4. (20 points) The Texas unemployment insurance system is described below.

When you are working while drawing Unemployment Benefits, state law allows you to earn 25 percent of your weekly benefit amount (WBA) and still receive your full WBA. When you earn more than 25 percent of your WBA, TWC reduces your weekly benefits on a dollar for dollar basis.

Suppose that you are currently collecting a \$400 WBA in Texas and have an opportunity to take a job that would pay \$20 per hour. Assume that you can vary your work hours from 0 to 80 hours per week.

- a. Draw your budget line and indicate the hours worked and total income associated with the vertical intercepts and any “kinks” in your budget line.
- b. Given the budget line you drew, what hours of work would be “irrational”? Why?
- c. Suppose that Texas eliminates the earnings exemption of 25% of your WBA so that you immediately begin to lose benefits dollar for dollar when you accept employment. Draw this new budget line on top of your earlier budget line and make sure that it can be easily distinguished from the first budget line.
- d. If you were working under the old system, will you be more or less likely to work under the new system? Explain with reference to income and/or substitution effects.
- e. If you were not working under the old system, will you be more or less likely to work under the new system? Explain with reference to income and/or substitution effects.

Name _____

ANSWER SHEET

1 B	11 A
2 C	12 C
3 A	13 C
4 A	14 E
5 C	15 C
6 \$1579	16 \$10,000
7 fall \$11,000	17 B
8 C	18 A
9 A	19 D
10 D	20 C