Second Exam: Economics 463, Labor Economics Spring 2005 in R. Butler's section
YOUR NAME:_____
Section I (30 points) Questions 1-10 (3 points each)
Section II (30 points) Questions 11-12 (5 points each)
Questions 13-14 (10 points each)
Section III (40 points) Questions 15-16 (20 points each)

Section I. Define or explain the following terms (3 points each)
1. internal rate of return in comparing wage streams--

2. 20/80 Pareto rule--

3. specific (human capital) training --

4. hedonic wage function--

5. Lorenz curve--

6. skill based technological change--

7. superstar phenomenon--

8. statistical value of a life--

9. rational expectations--

10. determination of wages in monospony (show clearly labeled graph)--

Section II. Miscellaneous.
True, False or Uncertain Questions (11&12)—you are graded for your explanation.
11. “The institution of mandated employee benefits (such as workers’ compensation injury insurance) in competitive labor markets, which are financed by a tax on the employer but not fully valued by the workers (i.e., the employees value the benefits at less than their cost), would cause employment and total compensation (wages plus the value of the benefits to workers) to fall.”

12. "If workers underestimate the amount of job risk, government regulation that forces the level of risk to be revealed makes workers better off.”

13. Suppose that the supply curve for school teachers is L^s=20,000 + 200 W and the demand curve for schoolteachers is L^d=100,000 -200W, where L=number of teachers and W=daily wage of teachers.
a) What is the equilibrium wage and employment level in the market?
b) Now assume that a $20 per day tax is placed on teachers. What is the new wage and employment level?
c) What is the deadweight loss of the tax per day? [hint: area of a triangle is .5*base*height]

14. Using the Lindsay model of Human Capital formation (lifetime work hours against life time wealth), show in a clearly labeled graph how anticipated changes in wages will always increase hours of work (under the basic Mincer, HK model assumptions) while unanticipated changes may increase or decrease hours of work.

15. Evidence for the Mincer Model. The Mincer schooling regression is basically

$$\ln wage = \beta_0 + \beta_1 \, educational\ attainment + stuff$$

The estimates of the parameters of the model may be tainted if there are unobserved differences in ability. In the book, tell how the following was used to attempt to get around the ability bias problem:

a) "the twins natural experiment"—

b) the draft lottery—

c) Suppose we estimated the model above and found that β_1 was estimated to be statistically significant and positive. Is this consistent with a pure signaling model of schooling? Why or why not?

16. The compensating wage problem in the market for risky jobs. SUPPLY: Assume that the compensating variation for risk (Z, just as in class) varies across workers following a uniform distribution:

$$G(\Delta W) = \Delta W/\varphi \quad \text{where } \Delta W \leq \varphi$$

giving the fraction of workers choosing risky jobs (N_1) as a function of the compensating wage differential, ΔW. The compensating differential ΔW is larger than that required (namely z) to induce them to work.

DEMAND: To keep the analysis simple, we also assume that the Benefit from allowing risk (B) is also uniformly distributed so that

$$3)\ F(\Delta W) = \Delta W/\alpha \quad \text{where } \Delta W \leq \alpha$$

is the number of firms for whom B is less than the compensating wage ΔW so that it is cheaper (in terms of lost output) to have a safe production environment than it is to pay the extra wages associated with risky work.

a) Show that supply curves slope upward and demand curves slope downward (where the relative employment of risky to safe workers (N_1/N_0) is a function of the wage differential, ΔW).

b) Find the (at least the implicit) equilibrium wage differential, ΔW.

c) What happens to the relative number of risky workers and the compensating wage when risk aversion increases (i.e., φ increases)?