FINAL Exam: Economics 463, Labor Economics Fall 2000 in R. Butler's section
**YOUR NAME:**_____
Section I (60 points) Questions 1-20 (3 points each)
Section II (80 points) Questions 21-28 (10 points each)
Section III (60 points) Questions 29-32 (15 points each)

Section I. Define or explain the following terms (3 points each)
1. defined benefit vs. defined contribution pension programs--

2. moral hazard--

3. risk averse--

4. intertemporal labor substitution--

5. Oaxaca wage decomposition--

6. hedonic equilibrium (with respect to injury risk)--

7. employers tastes for discrimination--

8. efficiency wages--

9. unemployed (Census definition)--

10. sample selection in female labor supply--

11. fixed time costs of working—

12. Marshalls rules of labor demand (give 2 of the four)--

13. indifference curves when utility=U(C+mL) [C=consumption, L=leisure and m is a constant)—

14. homothetic production function—

15.cobwell model of labor supply--

16.monopsony—

17.Coase theorem—

18.tournament theory of executive wage structure—

19. deadweight loss of a payroll tax--

20. common law defenses (before workers compensation laws)--

Section II. Part one: some favorite diagrams

21. Using isoquants and budget constraints, define or show the following: a) the marginal rate of technical substitution, and b) the elasticity of substitution between capital and labor.

22. Using isoquants and budget constraints, define or show the following a) the substitution effect of a wage increase and b) the scale (output) effect of a wage increase.

23. Show and discuss how workers, with differing abilities, would sort themselves into piece-rate and time-rate jobs, given that they are all equally risk averse.

24. If workers value their unemployment and workers compensation coverage at less than its full cost, what will happen to employment and wages once those programs are implemented assuming that the firm pays for all the insurance costs of those programs.

Second II. Part two: True, False or Uncertain Questions—you are graded for your explanation.

25. True or False, explain your reasoning: "Increasing the level of unemployment insurance benefits will prolong the average length of spells of unemployment. Hence, a policy of raising UI benefit levels is not socially desirable."

26. "The introduction of a costly new high-speed mass transit system that is financed by high fares may simultaneously reduce the time costs and increase the monetary costs of commuting to work. This should lead to an unambiguous increase in the total number of hours worked by commuters."

27. True or False, explain your reasoning: "The underpayment now, overpayment later" schemes of internal labor markets require firm specific capital in order to be an attractive form of compensation to the firm and workers."

28. True or False "Wages of those constrained to work fewer hours will be higher than those who, ceterus paribus, are free to choose the hours they work."

Section III.
29. 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, $\Delta W$. The compensating differential $\Delta W$ 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 $\Delta W$ 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, $\Delta W$).

b) Find the (at least the implicit) equilibrium wage differential, $\Delta W$.

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

30. Suppose that we live in a signaling world, with two types of individuals. Blue types have inherent marginal products of 2, and red types have inherent marginal products of 1 (they are blue and red only on the "inside," employers cannot tell them apart). The cost of acquiring "E" years of schooling is E for blues, and 3E for the reds. What is the equilibrium level of schooling sufficient to sort out the reds from the blues? How does each group fare relative to a world in which there was no signaling?

31. Develop as fully as you can, a model of hierarchial discrimination, in which men do not like to be supervised by women, but women don't mind being supervised by men. What are the implications of your model if a) there is no difference in ability within or between men and women? What are the implications of your model if b) there are ability difference across women, and across men?

32. Develop a model of the allocation of time within the home (with two or more commodities). Discuss as completely as you can what will happen to time intensive commodities as the wage rate increases.