

YOUR NAME: _____

Section I (30 points) Questions 1-10 (3 points each)

Section II (40 points) Questions 11-14 (10 points each)

Section III (30 points) Questions 15-16 (15 points each)

Section I. Define or explain the following terms (3 points each)

1. defined benefit vs. defined contribution pension programs--

2. reservation wage--

3. time-intensive household commodities--

4. intertemporal labor substitution--

5. age/earnings profile--

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

7. backward-bending labor supply curve--

8. Mincer schooling model--

9. labor force (Census definition)--

10. sample selection in female labor supply--

Section II. True, False or Uncertain Questions—you are graded for your explanation.

11. “If the utility function is Leontiff $U = \min(\beta_L L, \beta_C C)$ —where L is leisure and C is consumption, the Marshallian labor supply function will not depend on wages or the price of goods since there is no substitution effect.”

12. "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."

13. “For individuals engaged in both home production and market work (and for whom leisure is a normal good), an increase in the market wage will increase home production if the income effect of the wage increase dominates the substitution effect.”

14. “With respect to wages, the impact of constrained hours of work (having a job that offers fewer hours of work than you prefer at the going wage rate at other available jobs) and uncertain layoffs (having a job in which the risk of being laid off was higher than at alternative jobs) is the same: constrained hours or higher layoff risk increases wages only if leisure is a normal good.”

15. 11. (This is worth 15 points). 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)?

16. Some view schooling as purely human capital acquisition; others view schooling as a pure signal (indicating innate productivity) but not increasing productivity. Indicate as many empirical tests that you can think of (or recall) that would at least partially distinguish between these two positions.