

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

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

1. elasticity of substitution between capital and labor=

2. dead-weight loss of a payroll tax=

3. change in quantity demanded=

4. monopsony=

5. decreasing returns to scale=

6. homothetic production function=

7. Euler's theorem for CRS functions=

8. social insurance=

9. net present value=

10. firm specific human capital=

Section II. Coach Butler for Congress (10 points each for analyzing proposals offered in questions 11 through 14). I am running on the BYU Labor Party platform. I have four great proposals for the working person; tell me what you think of them below. You are graded for the quality of your economic analysis (graphs and other forms of math are especially welcomed), and not for your ideological yearnings and meanderings.

11. We will pass a law making all competitive firms operate in the region of output where the marginal productivity of labor exceeds the average productivity of labor, ensuring that labor will be well paid in the long run.

12. We will save jobs while maintaining wages at Geneva by enacting the following laws in Congress:

- a. increase the tariff on steel imports
- b. pass a law making it illegal for laying off steel workers because of automation
- c. impose a tax on non-labor inputs used in steel making (to encourage use of more labor)
- d. shift the social security tax so that the steel company at Geneva pays all of the tax, rather than paying just the half that the steel company currently does (the employee pays the other half)

13. We will mandate that each new hire be trained for at least 3 positions within the firm (for those firms with 25 or more employees). The net impact of this law will be to hedge HK risk in medium and large-sized companies, increase output, and hence, also increase the demand for workers.

14. The Mormon Mothers Act: Adopt a policy requiring employers to offer four months of paid leave for mothers of new born babies.

15. (This is worth 30 points). Suppose that the production function is $Y = \min(\beta_L L, \beta_K K)$. Then answer the following:

- a. what is the expansion path for this production function (draw a clearly labeled graph with the slope indicated at each level of output, or give the formula).
- b. Now assume that the wage rate is \$3/hour; the user price of capital is \$1/hour; and that $\beta_L=2$ and $\beta_K=1$. What is the algebraic value of the long run elasticity of demand for labor?
- c. As the share of labor in output goes up, does the elasticity of the demand for labor become more inelastic or more elastic?
- d. Suppose that β_L increases from 2 to 3, by how much will this decrease the demand for labor (if at all)?