

Instructions: Attempt only one question. Your score will be based on how you show your work. If you do both questions, *the one with lower score will be selected.* Student ID _____

Question 1: Consider a simple labor market model. The conventional settings usually assume that firms demand for labor, and households supply for their labor workforce. Suppose that the market demand labor and the market supply for labor can be given by the following two equations,

$$\text{Demand: } L^d = 12,000 - 5w$$

$$\text{Supply: } L^s = 2,000 + 15w$$

where L^d and L^s is the labor demanded and labor supplied, respectively. W is the market wage. Consider the following problems.

1.1) (10 points) Find the equilibrium wage *and* labor employment in the market.

1.2) (3 points) Do you think what would happen if the government has set a minimum wage policy at \$600? Would the policy affect the equilibrium employment in the market?

1.3) (7 points) Suppose the government is planning to impose a pay-roll tax on wage income, i.e. taxing on wage that households receive. Would the households be bearing upon more or less on the tax incidence than firms? Why? Explain the reason? Provide some figures to support/confirm your answer.

Instructions: Attempt only one question. Your score will be based on how you show your work. If you do both questions, *the one with lower score will be selected.* Student ID _____

Question 2: Consider market for good x. Suppose that the market demand equation is given by

$$P_x = 10 - bQ_x^d + cP_y; \quad b > 0 \text{ and } c > 0$$

and the equation for market supply is given by

$$P_x = 20 + dQ_x^s; \quad d > 0$$

2.1) (6 points) Specify the appropriate range of P_y (price of good y) such that the market equilibrium for good x is guaranteed to exist.

2.2) (10 points) Solve for the equilibrium price and quantity of the market for good x.

2.3) (4 points) Based on the value of the coefficients assumed, how does the change in price of good y affect the equilibrium quantity of the market for good x? Explain your answer.