

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 150 points (to be scaled up to 230 points) and is scheduled to take 75 minutes (but you can take the full 2 hours.) Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes.

1) (10 points) Answer EITHER Part A OR Part B.

A) What is *economic rent*?

B) What is meant by *derived demand*?

2) (18 points) Answer EITHER Part A OR Part B.

A) Suppose you were selling a collectable and you knew there were three people who really wanted it a lot. Would you use a sealed first-bid auction, a Dutch auction, or an oral English first-bid auction?

Explain your logic.

B) What is the “winner’s curse”? Is it more likely to occur with a public valuation or a private valuation auction? Is it more likely to occur with an oral English auction or sealed-bid auction? Explain your logic.

3) (22 points) Answer EITHER Part A OR Part B.

A) Suppose that Subaru decides whether or not to make pick-up trucks. Then Ford decides whether to charge a high price or a low price. After that, Subaru decides whether to charge a high price or a low price. If both charge a high price, then Ford earns \$1000 and Subaru earns \$500. If they both charge a low price, then Ford earns \$700 and Subaru earns \$300. If Ford charges a high price and Subaru charges a low price, then Ford earns \$100 and Subaru earns \$800. If Ford charges a low price and Subaru charges a high price, then Ford earns \$1400 and Subaru loses \$100. If Subaru stays out, then Ford will earn \$1800 when charging a high price and \$1300 charging a low price. Write the decision tree and find the equilibrium. Briefly explain how you found the equilibrium.

B) Suppose a company has a monopoly in an area and another company is thinking of entering the market. When would the threat of lowering their prices not be a credible threat? Explain your logic. How could they make it a credible threat? Explain how that could deter entry.

4) (22 points) Answer EITHER Part A OR Part B.

A) Draw two different MRPL curves for two firms. Find the total demand for labor assuming that there are only the two firms and the price of the final product does change. State how you found that demand curve. If we relaxed the assumption that the price of the final product does not change, how would the graph change? Explain your logic.

B) Draw a MV/AE diagram for a firm which has monopsony power in hiring a type of labor. Find the equilibrium quantity and wage. Explain how you found them. How can a firm get monopsony power in the labor market?

5) (26 points) Answer EITHER Part A OR Part B.

A) Suppose a bond has a coupon rate of 4%, face value of \$1000, and a maturity date of 2027/3/31. Assuming the interest is paid yearly on 3/31, setup the equation which would be used to find out how much you would pay for the bond if you were willing to settle for a 3% return. State how you determined what numbers to put where. Without doing the calculation, would you pay more than, less than, or

equal to \$1000? Explain your logic.

B) Suppose you were the head of a company deciding on whether or not build a factory. How would you decide what discount rate you would use? Explain your logic. Suppose you were considering going to graduate school. How would you decide what discount rate you would use? Explain your logic.

6) (26 points) Answer EITHER Part A OR Part B.

A) Suppose you are about to graduate and are thinking about a 2-year masters program. The program costs \$10K a year. If you get a job now, you would earn \$40K a year for the rest of your working life, which will be 45 years. If you get the masters degree, you will earn \$45K per year until you retire. Setup the equation for calculating the effective rate of return you will be getting. Explain how you determined with values you put where and how you would find the effective rate of return if asked to do so.

B) Suppose that a factory costs \$1M to build this year. Next year, it will lose \$500K. The 10 years after that, it will make \$400K per year. At the end, you can sell the factory for \$300K. Setup the equation for calculating the effective rate of return you will be getting. Explain how you determined with values you put where and how you would find the effective rate of return if asked to do so.

7) (26 points) Answer EITHER Part A OR Part B.

A) Draw a budget constraint/indifference curve diagram for income and leisure. Illustrate the effects of a pay raise. Explain why the curve(s) moved as drawn. Draw the necessary lines to find the income and substitution effects. Explain how you found the effects. Given your diagram, is the person in the upward sloping or backwards bending part of the labor supply curve? Explain your logic.

B) Draw the diagram for labor supply and demand where there are two different companies with different labor demand curves, and a fixed supply of labor. One of the firms unionizes. It raises the wages it pays. Illustrate the effect of that on how many workers work for each company and the pay at each factory. Explain how you found each.