

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 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I cannot give extra time because some students have a class after your class.

1) (12 points) Answer EITHER Part A OR Part B.

A) Explain how mutual funds reduce risk.

B) What is *loss aversion*? Give an example of how that might affect a person's behavior.

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

A) Draw a MPL/APL diagram. Illustrate the effects of an increase in the amount of capital. Explain why it moved as drawn.

B) Draw the TPL diagram. Explain how we can find the APL and MPL from the graph. Prove that will give you APL and MPL.

3) (20 points) Answer EITHER Part A OR Part B.

A) Suppose that if you buy 200 hats, they cost \$40 each, but if you buy 120 hats, they cost you \$50 each. You can sell hats for \$60 each. If you do not sell the hats, you can sell them back to the wholesaler for half of what you paid. Suppose that there is a 60% chance that you can sell 200 hats and 40% chance that you can only sell 120 hats. What are the expected profits if you order 120 hats and if you order 200 hats? If you knew beforehand what the state would be, so you would have nothing to sell back, then what would the expected profits be? How much would you be willing to pay for the information about the state? Show all work and briefly state what you did.

B) Draw the diagram with the portfolio return on one axis and the standard deviation on the other axis. Suppose the riskless return is 4% and the risky return is 12% with a  $\sigma_M$  of .4. Draw the budget constraint. Draw normal shaped indifference curves for a risk averse person who puts 75% of their portfolio in the stock market. Prove that this person's portfolio should be 75% in stocks. What is their expected return and what is their standard deviation? Briefly explain how you found the budget constraint, the return and the standard deviation.

4) (24 points) Answer EITHER Part A OR Part B.

A) Draw the AFC/ATC/AVC/AFC/MC diagram. Illustrate an increase in the price of electricity for a shoe store. Explain why the curve(s) moved as drawn. Explain why you chose variable costs or fixed costs.

B) Draw the AFC/ATC/AVC/AFC/MC diagram. Illustrate an increase in the rent. Explain why the curve(s) moved as drawn. Explain why you chose variable costs or fixed costs.

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

A) Copy the table to the right into your test booklet. Fill in the rest of the entries. Show all work for all cells. If there is no work, state how you found it.

B) Draw an isoquant/iso-cost diagram with two of each line. Have the wage rate be \$20/L and the rental rate be \$40/K. Have the diagram show increasing returns to scale. Make sure you explain how your graph shows increasing returns to scale and explain how you know how much your costs are on your two isocost lines.

Q	TC	TVC	ATC	AFC	AVC	MC
1		4		24		
2			15			
3					3	
		16				7