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Trade and Investment Strategy
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REVIEW TEST

There are seven equally weighted questions. You may take the test as a group with up to 4 members, but groups should compete rather than cooperate with each other. (Remember to label who belongs to your group!) Please submit your answers as an attached file (a PDF format is preferred) to Chen by email before 8:00AM Friday morning.

Question 1

Explain why you should bid differently in a first price auction than in a second price auction. If that is so, when and why is the expected revenue from these two different auction mechanisms the same?

Question 2

What are the key features to look for in a suspected insider trading event? Include a discussion about price movement, volume traded, the bid ask spread, and the number of limit orders in the order book.

Question 3

Arbitrage pricing theory (APT) is usually applied to liquid markets where the buy price equals the sell price.

1. Suppose the prices of 3 assets (X, Y, and Z) are linear combinations of 2 factors (A and B). What would the APT say in that case about the price Z in terms of A and B if markets are perfectly liquid? (Show your work.)
2. Now suppose the assets are traded on a limit order market. What would APT say in that case?

Question 4

Explain why many auctions are one sided limit order markets, using examples of auctions to show who (bidder or auctioneer) is making the “market order” and who is making the “limit order”.

Question 5

On a two dimensional diagram:

1. label “household wealth if the house burns down” on the X axis and “household wealth if the house does not burn down” on the Y axis
2. put in the wealth endowment point of a home owner before he buys insurance
3. use an indifference curve show his certainty equivalent
4. show why a risk averse house owner prefers to fully insure his house if the premium is actuarially fair.

Question 6

You are faced with the chance of an investment opportunity which yields $500,000 with probability 0.3, $100,000 with probability 0.2 and 50,000 with probability 0.5. If you were risk averse, what is the most you would be willing to pay for this opportunity, and what is the minimum you would be willing to pay? (Explain.)

Question 7

What is the rationale for valuing a firm by the sum of its discounted dividends? Shouldn’t capital gains count too? Explain what the discount factor involves. And how should you account for risk?