

CF963 Mock Exam Questions

Question 1 Basics of Computational Finance and Economics

- (a) What is computational finance and economics? [10%]
- (b) How do advances in hardware and software impact the research in finance and economic research? Justify your answer carefully. [30%]
- (c) Describe two examples research areas in computational finance and economics. How are these two research areas affected by the advances in hardware and software? [60%]

Question 2 Evolutionary Computation and its application to finance and economics

- (a) Explain in details how Genetic Programming works. [30%]
- (b) Explain, with the help of an example, how a forecasting strategy can be represented for Genetic Programming to use. [30%]
- (c) Explain how the strategy that you have proposed above can be evaluated. [10%]
- (d) Would the strategies trained with data from a bull market using genetic programming be useful in a bear market? Justify your answer carefully. [10%]
- (e) Would evolutionary computation have been used by a University student on financial forecasting 30 years ago? Please justify your answer carefully. [10%]
- (f) What will happen to the prices of an equity if everyone in the market uses the same algorithm to determine whether to buy or sell? [10%]