Paper S9 "Financial Physics" 2006

41 candidates, mean 33.7, SD 9.46

This paper examined a range of topics from the course, each of which was covered in depth in the lectures and notes. The questions were straightforward and could have been answered very well by anyone who attended the lectures and had made the effort to understand the notes. The over-riding impression was that students have managed to pick up the main course material.

Qu 1: 26 attempts, mean 16.0, SD 4.21

General essay-like question covering scaling properties, market microstructure and multi-agent models. Most students gave a reasonable answer, though many confused various elements of the course when trying to answer the question.

Qu 2: 35 attempts, mean 19.3, SD 4.57

Derivation of Black-Scholes equation using Ito calculus, and discussion of solutions and features. In general this was well answered.

Qu 3: 12 attempts, mean 16.0, SD 4.82

Effects of high-order temporal correlations in a stochastic process for prices. Some students had trouble with the various correlation function results. It was essentially the same problem as the example in the lecture notes.

Qu 4: 7 attempts, mean 13.7, SD 2.50

Fluctuations and dynamics in multi-agent models under crowding conditions in the binary strategy space. Answered reasonably in general, though several students couldn't get much further than the first part. This problem was directly from the lecture notes.