1.Briefly describe 5 applications for Cellular Automata.

2. Swarm technology and genetic algorithms can give us solutions to problems that cannot be solved directly due to the computation time, such as the traveling salesman problem (i.e. finding the shortest route between many cities). Compare and contrast the methods used by swarms and genetic algorithms to solve these types of problems. 2 points each

3. What are the differences between the AI necessary to operate an automated train and a self-driving car? Would you use an expert system, a fuzzy system, a genetic algorithm, genetic programming, ANN, or a swarm? Explain why this would be your choice.

5. What’s the relationship between feedback loops and artificial intelligence? Give an example of how the feedback loop would work in an AI application.

6. Describe the philosophical differences between the “neats” and the “scruffies”. Give an example of an application area where the different approaches would be useful.