

Sample Questions for comp4006/7011 from lectures 1-5
(no questions on Lecture 4, L-systems)

1. Explain what makes a system a complex system, rather than a complicated one.
2. Networks are used to represent complex systems in many different domains.
 - a. Explain how you could use a network to represent the following domains (it will be sufficient to describe what the nodes and links would represent in each system):
 - i. The relationships between authors of journal and conference articles.
 - ii. An electricity system.
 - b. Explain what is meant by the density of a network. You may use words or equations (define any terms used).
3. Explain why your comp4006/comp7011 project can be viewed as a complex system.
4. Summarise Michael Ward's challenges for the health care system as a complex system.
5. Explain why a cellular automata (CA) is considered a complex system. Give an example of a CA and explain the classes of behaviours that it can exhibit.