

**COMPUTER SCIENCE TRIPOS Part II – 2012 – Paper 9**

**10 Principles of Communications (JAC)**

- (a) Describe the operation of Distance Vector (D-V) and Link State (L-S) routing algorithms, with particular reference to their complexity in terms of number of messages given the number of nodes and edges in the network. [5 marks each]
- (b) Small world networks are a particular form of random graph which exhibit clustering.
  - (i) Describe two common ways this clustering can occur in the way the graph is created. [3 marks each]
  - (ii) Discuss the design of a routing algorithm for a small world network. Would you stick with existing schemes like D-V or L-S? [4 marks]