

ITS 413 – QUIZ 3

First name: _____ Last name: _____

ID: _____

Total Marks: _____

out of 10

- Write your name and ID in the space provided at the top of the sheet.
- Answer the questions on this sheet(s) only, using the space given.
- When asked to *describe* or *explain* something, your answer must be clear, concise and unambiguous. Usually about 1 to 4 sentences.

Question 1 [3 marks]

Multiple Choice – choose the most accurate answer (only choose one):

Tunnelling IPv6 over an IPv4 network:

- Improves the efficiency of the end-to-end connection
- Provides a method for upgrading IPv4 to IPv6 networks
- Allows all nodes in the network to use auto-configuration
- Improves the security of the end-to-end connection

Auto-configuration in IPv6:

- Requires a DHCP server
- Is a method to help the transition from IPv4 to IPv6 networks
- Replaces manual configuration of IP addresses
- Allows a computer to choose its own IP address

The main motivation of developing and deploying IPv6 (compared to IPv4) is to:

- Provide a more efficient network
- Allow nodes to be configured automatically
- Increase the address space
- Allow for different options in IP

Question 2 [1.5 marks]

One way to describe a set of protocol rules is as a state machine. If “current state” is one of the four components of the state machine, list (or describe) the other three components.

Question 3 [2 marks]

If you were describing the following protocols (for example, writing a design for the protocol), give an example for the *service user*:

- a) Internet Protocol version 6 (IPv6)

- b) Transmission Control Protocol (TCP)

Question 4 [1.5 marks]

Name three organisations that develop networking standards. (You can give the abbreviation)

Question 5 [2 marks]

Name the four items that identify a TCP connection.