

ITS 413 – QUIZ 0

First name: _____ Last name: _____

ID: _____

Total Marks: _____

out of 12

Question 1 [3 marks]

Draw *either* one of the following protocol stacks, giving the name for each layer:

- the Open Systems Interconnection (OSI) seven layer protocol stack
- the TCP/IP (or Internet) five layer protocol stack

Question 2 [3 marks]

One reason for breaking a large piece of data (for example 10,000 bytes) into small packets (for example, 10 packets of 1000 bytes each) is to reduce the number of retransmissions if errors occur. What is a disadvantage of sending small packets? Explain your answer.

Disadvantage [1 mark]:

Explanation [2 marks]:

Question 3 [6 marks]

Selecting from the eight protocols below, for each sentence write the protocol that most accurately completes the sentence.

The protocols you can select from are:

1. Transmission Control Protocol (TCP)
2. Open Shortest Path First (OSPF)
3. Domain Name System (DNS)
4. Internet Protocol (IP)
5. Carrier Sense Multiple Access (CSMA)
6. Address Resolution Protocol (ARP)
7. HyperText Transfer Protocol (HTTP)
8. User Datagram Protocol (UDP)

Complete these sentences with the above protocols (write the acronym, for example: TCP):

_____ maps human-readable addresses to Internet Protocol (IP) addresses.

_____ aims to provide equal access to nodes contending for a channel.

_____ provides flow control and congestion control in the Internet.

_____ maps Internet Protocol (IP) addresses to hardware addresses (used at MAC layer).

_____ distributes routing information in networks.

_____ provides a reliable stream-oriented service.