

Exercise 4

Name:_____ Student ID:_____

Question 1

Suppose a router has 4 links, and packets are to be forwarded as shown in the following table. The bits highlighted in **bold** font are prefix match.

Destination address range	Link interface
00000000 00000000 00000000 00000000 through 00001111 11111111 11111111 11111111	0
00110000 01000000 00000000 00000000 through 00110000 01000111 11111111 11111111	1
01000011 01000000 00000000 00000000 through 01000011 01111111 11111111 11111111	2
otherwise	3

Find the link interface for datagrams with the following destination addresses.

01000011 10001001 01010001 01010101
01000011 01000100 11000011 00111100

Question 2

Consider sending a 5000-byte datagram into a link that has an MTU of 1100 bytes.

- (a) How many fragments are generated?
- (b) What are the values in the fragment offset field?
- (c) What is the size of the last fragment?

[8 marks]