Name: Class: Mark:

1. Perform a right shift on the following numbers: [3]

* 1. 00011010
  2. 11100110
  3. 01000111

2. Perform a left shift on the following numbers: [3]

1. 00011010
2. 11100110
3. 01000111

3. (a) Perform both a left shift and right shift on the number 01100110 which represents   
102 in denary.

For each shift, also convert the number to denary. [4]

(b) State the effect of performing a right shift on a binary number. [1]

(c) State the effect of performing a left shift on a binary number. [1]

(d) Explain the problem with performing a right shift on the 8-bit binary   
number 01100111. [2]

4. Calculate the two’s complement of the binary number 01111010. [2]

5. State the value of the two’s complement number 10010110. [1]

6. State the value of the two’s complement number 00110111. [1]

[Total 18 marks]