ASCII and Unicode are used to represent characters.

01.1 Every ASCII character is stored in a computer system as a binary bit pattern.
State the minimum number of bits required to represent any of the 128 characters used in ASCII.

[1 mark]

7

01.2 State how many **extra** bits will be required to represent a character in ASCII if the number of possible characters were to be extended from 128 characters to 256 characters.

[1 mark]

1

01.3 The character F is represented in ASCII code as the decimal value 70.

Using this information, state the decimal ASCII code value used to represent each of the characters below.

[2 marks]

B: 66

N: 78

02.1 State **two** advantages of using Unicode instead of ASCII.

[2 marks]

Any of: more characters available [1], possible to represent non-English characters [1] can represent accents and other punctuation marks [1], can use characters such as emojis [1]

02.2 Describe **one** disadvantage of using Unicode instead of ASCII.

[2 marks]

Two marks – needs to be 1 for basic point and 1 for why it is important. Such as:

requires more memory [1] so it may be slower to transfer data [1]

expect references to memory issues or ones related to complexity