01 The term pixel is short for Picture Element.

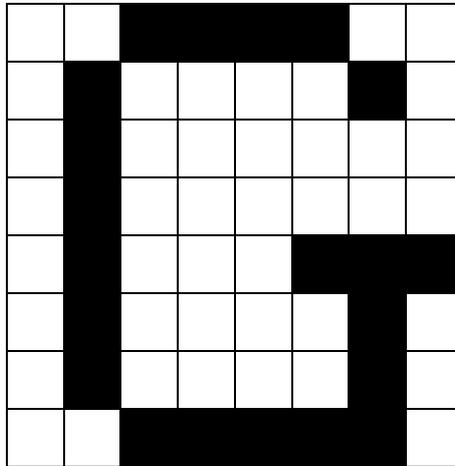Define the term **pixel**.

[1 mark]

A single point in a graphical image/a single point in an image file/a single point in a bitmap

02 Figure 1 shows an 8 pixel x 8 pixel black and white bitmap.

Figure 1

02.1 Calculate the file size in bits of the bitmap shown in **Figure 1**.

[1 mark]

= 8 x 8 = 64 bits (accept 8 Bytes)

02.2 The first row of the bitmap in **Figure 1** is encoded using the bit pattern show below:

11000011

Using this information, write down binary representation for row 5 of the bitmap shown in Figure 1.

[1 mark]

10111000

02.3 A 10 pixel x 10 pixel bitmap image contains 6 different colours.

Calculate the minimum file size, in bits, of this image when represented as a bitmap

You should show your working.

[2 marks]

6 colours = 3 bit colour depth [1 mark for some indication of using 3 bits per pixel – can be calc]

= 10 x 10 x 3 = 100 x 3 = 300 bits