

Due Tuesday 3/11/2015

- 1) Convert the following binary numbers to decimal
a) 1110110 b) 0110110 **(2)**

- 2) Convert the following decimal numbers to binary
a) 134 b) 148 **(2)**

- 3) Convert the following negative numbers to 8 bit two's complement
a) -3 b) -15
b) -35 d) -127 **(4)**

- 4) What is the name of the notation by which computers store real numbers? **(1)**

- 5) What determines the range of numbers in this notation?
What is the range of numbers that can be stored using 8 bits for this? **(2)**

- 6) What determines the accuracy of a number in this notation? **(1)**

- 7) What are the two codes called which are used to store text? **(2)**
How many bits are used to store a character in each code?

- 8) Calculate the size in bytes of a bit map 4 x 3 inch using 72 dots per inch and with a colour depth of 1 bit. **(3)**

- 9) How many colours can be represented using a colour depth of 16 bits? **(1)**

- 10) A digital photo is 2592 x 1944 and uses RGB colour 8 bits for red, 8 bits for green and 8 bits for blue, ie 24 bits per pixel. How big is the file? **(2)**

20 marks