COMP5422 Multimedia Computing: Quiz1

This is a closed book and closed notes test.

Name: **Student number:**

Multiple choices: (4 points; 1 point each)

1. Suppose that a full color digital image has 100 rows and 100 columns. For each pixel in each channel, its value is an integer within [0, 1023]. How many bits do we need to store this image without compression? [E]

A. 10,000 bits; B. 80,000 bits; C. 100,000 bits; D. 240,000 bits; E. 300,000 bits.

2. "*By using the primary colors Red, Green and Blue, we can produce all visible colors*" is [B]

A. True; B. False.

3. Mixing blue and yellow could produce [A]

A. White; B. Black; C. Green; D. Red.

4. "*Huffman coding is a bottom-up approach to entropy coding and it produces the minimum redundancy code*" is [A]

A. True; B. False.

Short answers: (2 points; 1 point each)

1. What is the binary representation of 0.375?
   Answer: 0.011.

2. What are the two essential steps in digitizing an analog audio signal?
   Answer: *sampling* in the time axis and *quantization* along the amplitude axis.