**Introduction to Computer Science**

**23.2 Faculty of Computing**



**Tutorial Session 06**

**Answer all questions.**

1. Do the following hexadecimal addition.

a. EF8616 + 6C3916

b. 140116 + A91D 16

c. FF 16 + FF 16

d. 2F9716 + 786016

2. The MAC address of a device is represented using hexadecimal. An example of a MAC address is given below. Each pair of hexadecimal digits is stored using 8-bit binary.

**70-66-55-F0-33-39**

Find your device’s MAC address and write the 8-bit binary equivalent for that MAC address.

3. Hexadecimal numbers are often used to represent colors within HTML or CSS.

The 6-digit hex color code should be considered in three parts.

* First two digits represents the amount of red in the color (max FF, or 255)
* The next two digits represent the amount of green in the color (max FF, or 255)
* The final two digits represent the amount of blue in the color (max FF, or 255)

By changing the intensities of red, green and blue, we can create almost any color.

E.g. orange can be represented as #FFA500, which is (255 red, 165 green, 0 blue).

By studying the above reference answer the following question.

What is the color that the following binary string represents:

**1010000000100000111100002**