Review

1) Outline how a colour can be represented in a computer.

2) Answer each part of the question:

A builder is renovating a series of apartments and is considering integrating a few electrical devices in each apartment into an automatic programmable system. One example is the integration of lighting, heating, ventilation and air conditioning.

(a) Identify **two** groups of users that might find this integrated technology particularly appealing. *[2]*

(b) Discuss **two** advantages, offered by this technology, that could be used in an advertisement for the apartments. *[4]*

(c) Evaluate **two** ways users can access the functionality of the integrated system at home. *[6]*

The same technology is adapted and used for intensive chicken farming; in this context a decentralized control is preferred.

(d) Describe how this could be achieved. *[3]*

Review

Review: Number Systems:

Complete the table:

Dec	Hex	Octal	Binary
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Review: **Converting Binary to Hexadecimal:**
To convert 1111010101001110_2 to base 16, we first break up the number into groups of four as shown below:

1111 0101 0100 1110

Now assign each group its corresponding hex value

1111 = F, 0101 = 5, 0100 = 4, 1110 = 14

When put together, we get $F54E_{16}$

Exercises:
1) Convert 10110011110001011001 1011 to hex _____
This represents an olive color:

2) Convert **#9933ff from hex to binary:**

This represents a purplish color:

The html color code for DeepSkyBlue can be represented as
RGB : rgb(0, 191, 255) where the numbers are in decimal
Hex : #00bfff
3) **Exercise** : Write the binary representation of DeepSkyBlue:

The color code rgb(250, 250, 50) represents an unnamed mustard color.
4) **Exercise**: Write the Hex value of this color:

5) **Exercise**: Write the binary value of this color:

Sources: http://www.learning-about-computers.com/tutorials/binary_and_hexidecimal.shtml
https://www.w3schools.com/colors/colors_picker.asp?colorhex=368664
http://www.binaryhexconverter.com/binary-to-hex-converter