

1 Tina is creating a website for charity events. She uses HTML to create the website.

(a) State what is meant by HTML.

.....
..... [1]

(b) She uses the hexadecimal colour code #43B7F0 as the background colour for her website.

(i) State whether background colour is an example of **structure** or **presentation**, in the website.

..... [1]

(ii) The hexadecimal colour code #43B7F0 is stored in three **8-bit** registers.

Give the **8-bit binary** values for each part of the hexadecimal code.

43							
B7							
F0							

[6]

(c) Tina uses a microphone to record a welcome message for her website.

(i) State whether the microphone is an **input** or **output** device.

..... [1]



- (ii) She wants to compress the recording to make sure that the file is as small as possible for the website.

Identify which type of compression she should use and describe how this would compress the file for the website.

Type of compression

Description

.....
.....
.....
.....
.....
.....
.....
.....
..... [4]

- (iii) Give **two** benefits of compressing the file for the website.

Benefit 1

.....

Benefit 2

..... [2]



4 Consider the logic statement:

$$X = (((A \text{ NAND } B) \text{ NOR } (B \text{ AND } C)) \text{ OR } C)$$

(a) Draw a logic circuit to match the given logic statement.

All logic gates must have a maximum of **two** inputs. Do **not** attempt to simplify the logic statement.



[4]

(b) Complete the truth table for the given logic statement.

A	B	C	Working space	X
0	0	0		
0	0	1		
0	1	0		
0	1	1		
1	0	0		
1	0	1		
1	1	0		
1	1	1		

[4]

5 Tammy is buying a new computer that has an LED display.

(a) **Five** statements about LED displays are given.

Tick (✓) to show if each statement is **True** or **False**.

Statement	True (✓)	False (✓)
It is a flat panel display		
It creates images using red, green and blue diodes		
It is not very energy efficient and gives off heat		
It can be used in mobile devices such as smartphones and tablets		
It is a front-lit display		

[5]



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