

Data representation – 2020 O Level 2210

1. [June/2020//Paper_11/No.9d](#)

Programs can be written in a low-level language.

(a) Identify **three** features of a low-level language.

- Feature 1
- Feature 2
- Feature 3 [3]

(b) Give **two** examples of a low-level language.

- Example 1
- Example 2 [2]

(c) Give **one** drawback of writing programs in a low-level language, instead of a high-level language.

-
- [1]

(d) A low-level language needs to be converted to binary before it can be processed by a computer.

(i) Give the **8-bit binary** value of the two denary values:

- 180
- 201 [2]

Working space

-
-
-
-

(ii) Give the **12-bit binary** value of the denary value **250**.

..... [1]

Working space

.....
.....
.....
.....

(iii) Binary can be represented as hexadecimal to make it easier to read.

Give the **hexadecimal** values of the 8-bit binary values:

10010011

00011101

[2]

2. June/2020//Paper_12/No.7

(a) Give the **denary** value of each of the three 12-bit binary values.

(i) 000000001100

..... [1]

(ii) 000011000110

..... [1]

(iii) 010011000001

..... [1]

Working space

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.....
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.....
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.....
.....
.....

(b) 12-bit binary values can also be represented as hexadecimal values.

Give the **hexadecimal** value of the 12-bit binary value.

000011101001

..... [3]

3. Nov/2020//Paper_12/No.1b,c

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]