Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

Cambridge IGCSE

CANDIDATE NAME	

CENTRE NUMBER		CANDIDATE NUMBER	

INFORMATION AND COMMUNICATION TECHNOLOGY　　　　　　**0417/31**

Paper 3 Data Analysis and Website Authoring　　　　　　**May/June 2018**

2 hours 30 minutes

Additional Materials:　　Candidate Source Files

READ THESE INSTRUCTIONS FIRST

Write your name, Centre number and candidate number in the spaces at the top of this page.
Write in dark blue or black pen.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.
You must **not** have access to either the internet or any email system during this examination.

Carry out **all** instructions in each step. You can track your progress through the examination by crossing out each question number.
Enter your **name**, **Centre number** and **candidate number** on every printout before it is sent to the printer.
Printouts with handwritten candidate details on will **not** be marked.
At the end of the examination put this **Question Paper** and **all your printouts** into the Assessment Record Folder.
If you have produced rough copies of printouts, put a neat cross through each one to indicate that it is **not** the copy to be marked.

Any businesses described in this paper are entirely fictitious.

The number of marks is given in brackets [ ] at the end of each question or part question.

Write today's date in the box below.

This document consists of **8** printed pages.

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[Turn over

Task 1 – Evidence Document

- Open the file **j1831evidence.rtf**

- Make sure your name, Centre number and candidate number will appear on every page of your Evidence Document by placing these details in the header.

- Save this as a word processed document in your work area with the file name **j1831evidence** followed by your candidate number, for example, **j1831evidence9999**

You will need to place screenshots and answers to questions in this Evidence Document.

Task 2 – Web Page

You work for Hothouse Design and will develop web pages for a small construction company called Bobby's Bricks.

Efficient markup and stylesheets must be used. All colour codes must be in hexadecimal.

- Create a new folder called **BB_html**

- Locate the following files and store them in your *BB_html* folder.

   BBcontact.htm
   BBmap.png
   BBtext1.txt
   BBtext2.txt
   BBlogo.jpg
   BBstyle.css
   blocks.jpg
   brickwork.jpg
   paving.jpg

1 • Create a web page called **BB.htm**

 This web page must work in all browsers and will have a table structure as shown below:

A 400×300	B 400×300	C 400×300
D 1200×250		
E 1200×150		
F 600×300	G 600×300	

 • Each table cell is identified with a letter and all dimensions are in pixels. The letters and dimensions shown in the table must **not** appear on your final web page.

 • The external table border must have a width of **4** pixels and all internal gridlines must have a width of **2** pixels. Table borders and gridlines must be visible.

[15]

2 • Place in cell A the image **brickwork.jpg**   [1]

3 • Place in cell B the text:

   Click on an image for further details

 • Set this text as style h2.

[2]

4 • Place in cell C the image **paving.jpg**

 • Resize this image in the markup so that it is **394** pixels wide and maintains its aspect ratio.

[2]

5 • Place in cell D the image **BBlogo.jpg**

   This is the logo of the company which appears on the company vehicles, letterheads, etc.

 • Make this image a hyperlink to open the web page *BBcontact.htm* in a new browser window called _**new**

[2]

6 • Place in cell E the text from the file **BBtext1.txt**

    • Set this text as style h1.

                                                                                  [2]

7 • Place in cell F the text from the file **BBtext2.txt**

    • Add your name, Centre number and candidate number to the end of this text.

    • Set the text *We will undertake building projects in other regions of the world.* as style h2.

    • Set the text *Web page design and creation by: Hothouse Design. Web page last edited by:* as style h3.

    • Make only the text *Hothouse Design* a hyperlink to the web page **http://www.hothouse-design.co.uk** which should be set to open in the same browser window.

                                                                                   [3]

8 • Place in cell G the image of the map provided.   [1]

9 • Make sure appropriate text is displayed if an image is not available.   [1]

10 • Centre align the table in the browser.   [1]

11 • Attach the stylesheet **BBstyle.css** to your web page and to **BBcontact.htm**

    • Save the web pages in your *BB_html* folder.

                                                                       [1]

*The stylesheet has been started but needs to be improved using the most efficient syntax. Make sure your stylesheet does **not** contain any html.*

12 • Open the stylesheet **BBstyle.css** in a suitable software package and examine its contents.

    • Edit this stylesheet so that it has the following specifications:

> Styles h1, h2 and h3 display the font **Zapf Chancery**, if this is not available then **Blackadder ITC**, if neither of these fonts are available then display the default serif font.
>
> Styles h1, h2 and h3 must be centre aligned text.
>
> Style h1 must be red with no green or blue elements.
>
> Style h2 must be blue with no green or red elements.
>
> Style h3 must be blue with no green or red elements.
>
> All borders and gridlines must be red with no green or blue elements and match the requirements of question 1.

EVIDENCE 1

Display the web page in your browser. If necessary, resize it so that:

- all the page can be seen
- all text can be easily read
- the address bar is visible.

Take a single screenshot of the browser window and place this in your Evidence Document.

EVIDENCE 2

Take a copy of the HTML source and place this in your Evidence Document.

EVIDENCE 3

Take a copy of your stylesheet and place this in your Evidence Document.

[8]

13 • Evaluate in your own words the choice of fonts used for this web page.　　　　[4]

EVIDENCE 4

Type your evaluation in your own words into your Evidence Document using no more than 100 words.

[Total: 43]

Task 3 – Spreadsheet

You are going to prepare a spreadsheet model to calculate the number of bricks used to build a wall.

14 • Identify the symbols used within spreadsheet formulae for the following mathematical operators:

  (a) Multiply

  (b) Divide

  (c) To the power of

  (d) Is not equal to

EVIDENCE 5

Type the symbols into the table in your Evidence Document.

---

[4]

• Save your Evidence Document.

15 • Open the files **j1831estimator.csv** and **j1831bricks.csv** in a spreadsheet package and examine the contents.

• Edit the file *j1831estimator.csv* so that it looks like this:

	A	B	C	D
1	**Bobby's Bricks**			
2	**Cost estimator for brick walls**			
3				
4	Thickness of wall – single skin or double skin?		Please enter S or D	
5	Length of wall will be:		Length in centimetres	
6	Height of wall will be:		Height in centimetres	
7	Type of brick chosen		Please enter brick code	
8				
9	You are planning a wall made from		bricks	
10	The wall will be		skin	
11	You will need to buy		bricks	
12				

• Save this as a spreadsheet with the file name **j1831_** followed by your Centre number and candidate number, for example **j1831_ZZ999_9999**

[7]

EVIDENCE 6

Take a screenshot showing cells A1 to C12 of your spreadsheet, including the row and column headings. Place this in your Evidence Document.

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16 • Place your name, Centre number and candidate number in the centre of the header.

• Place an automated file name including the file path on the right in the footer.

[2]

For steps 17 to 20 you may enter test data to help you create your model.

17 • Restrict the data entry in cell B4 to **S** or **D** [2]

EVIDENCE 7

Take a screenshot of your method of restricting the data entry. Place this in your Evidence Document.

---

18 • Enter a formula in cell B10 to display:
   ○ **single** if cell B4 contains *S*
   ○ **double** if cell B4 contains *D*

[4]

19 • Enter a function in cell B9 to lookup the name of the type of brick using the file *j1831bricks.csv* [5]

Some walls are single skin walls; these are one brick thick. Stronger walls are double skin; these are two bricks thick.

To calculate the number of bricks that will be required for a single skin wall, the following formula is used:
• *the length and height of the wall are multiplied together*
• *this is divided by the face area of each brick.*

Twice as many bricks are needed for a double skin wall.

For both double skin and single skin walls:
• *an extra 10% is always added as some bricks will be damaged*
• *an extra 50 bricks are added as some will need to be cut.*

20 • Enter a formula in cell B11 to calculate the number of bricks required for a wall. You can only buy whole bricks. [9]

21 • Save and print the spreadsheet showing the formulae. Make sure:
   ○ it is in landscape orientation
   ○ row and column headings are displayed
   ○ the contents of all cells are fully visible.

[1]

PRINTOUT 1

Make sure that you have entered your **name**, **Centre number** and **candidate number** on your spreadsheet showing the formulae.

---

22 • Enter data to build a single skin wall with:
   ○ the brick code **V**
   ○ a length of **400** centimetres
   ○ a height of **60** centimetres. [1]

23 • Print the spreadsheet showing the values. Make sure the:
  ○ printout fits on a single page
  ○ contents of all cells are fully visible.

[1]

> **PRINTOUT 2**
>
> Make sure that you have entered your **name**, **Centre number** and **candidate number** on your spreadsheet showing the values.

24 • Change the model so that the wall is double skin and its height is **50** centimetres.

• Print the spreadsheet showing the values. Make sure the:
  ○ printout fits on a single page
  ○ contents of all cells are fully visible.

[1]

> **PRINTOUT 3**
>
> Make sure that you have entered your **name**, **Centre number** and **candidate number** on your spreadsheet showing the values.

• Save and print your Evidence Document.

> **PRINTOUT 4**
>
> Make sure that you have entered your **name**, **Centre number** and **candidate number** on your Evidence Document.

[Total: 37]