

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

**Pearson Edexcel International Advanced Level**

**Monday 19 May 2025**

Afternoon (Time: 3 hours)

Paper  
reference

**WIT12/01**

**Information Technology**

**International Advanced Subsidiary/Advanced Level**

**UNIT 2**

**You must have:**

A computer workstation with a text editor, browser software and Questions folder (containing assets, HTML and CSS files).

Total Marks

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions **requiring a written answer** in the spaces provided – *there may be more space than you need.*
- Carry out the practical tasks on the computer workstation and save new or amended files using the file name given in the question.
- You must **not** use the internet during the examination.

## Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

## Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Save your work regularly.
- Check your answers if you have time at the end.

Turn over ►

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## SECTION A

You are advised to spend about 60 minutes on this section.

Answer ALL questions in this section.

Answer the questions requiring a written answer in the spaces provided.

Some questions will require you to save code in a specified format.

1 HTML is used to structure web pages.

(a) (i) The head element is used to supply information about a document.

Name **one** piece of information that could be included in the head element.

(1)

(ii) An audio file is embedded in a web page.

State the purpose of the **src** attribute that is used in the HTML code to embed an audio file.

(1)

(b) **Figure 1** shows some HTML code for a form.

```
3 <form>
4   <label for="age">Age:</label>
5   <input type="number" id="age" name="age" value="18">
6   <input type="reset" value="Reset">
7 </form>
```

**Figure 1**

An age of 21 is input.

State what will happen when the reset button is clicked.

(1)



(c) Information in a form can be sent from the browser to the server using the GET request or the POST request method.

Explain **one** difference between the GET request and the POST request methods.

(2)

.....

.....

.....

.....

(d) **Figure 2** shows how a list should be displayed in a browser.



**Figure 2**

The list does not display as intended because there are **two** errors in the HTML code.

Open file **Q01d.html** in a browser to identify the errors.

Open the file in your editor.

Amend the code to correct the **two** errors.

Save your amended code as **Q01dFINISHED.html**

(2)

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- (e) A web page needs an internal hyperlink from the bottom of the page to the first heading on the page.

Open the file **Q01e.html**

Add an id to the heading **Inspirational quotes about trees**.

Add a hyperlink from the text **Back to the top** to the heading **Inspirational quotes about trees**.

Save your amended code as **Q01eFINISHED.html**

(2)

(Total for Question 1 = 9 marks)



2 CSS is used by browsers to style HTML elements.

(a) A CSS framework is a collection of **pre-built** CSS stylesheets.

Explain **one** reason why a web developer may choose to use a CSS framework when developing a website.

(2)

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(b) **Figure 3** shows HTML and CSS code.

```
6 <style>
7   img {
8     height: 200px;
9   }
10  img:hover {
11    transition: 3s;
12    rotate: 180deg;
13  }
14 </style>
15 </head>
16 <body>
17 
```

**Figure 3**

Lines 10 to 13 in **Figure 3** show CSS styling for the image on line 17.

Describe the effect that this CSS code has on the image.

(3)

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(c) A web page contains a table that needs to be formatted using CSS.

The table should have:

- a 3-pixel green border
- the image **tree.jpg** as the background.

Open the file **Q02c.html** in your editor.

Amend the code to format the table.

Save your amended code as **Q02cFINISHED.html**

(2)

(d) A web page contains text that needs to be formatted using CSS.

The headings must:

- have a font size of 30 pixels
- be centre aligned
- be underlined.

The paragraphs must have a left margin of 80 pixels.

Open the file **Q02d.html** in your editor.

Amend the code to implement the requirements.

Save your amended code as **Q02dFINISHED.html**

(4)

**(Total for Question 2 = 11 marks)**



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**QUESTION 3 BEGINS ON THE NEXT PAGE.**



3 JavaScript provides interactivity for web pages.

- (a) **Figure 4** shows the JavaScript used to calculate and display the number of small and large packages.

```
10 packageTotals = [6,3]
11 packageVolume = 0
12 count = 1
13
14 while (count <= 3){
15 {
16     packageVolume = parseInt(prompt("Volume of the package? "))
17
18     if (packageVolume <= 0)
19     {
20         alert("Not a valid package size")
21     }
22     else if (packageVolume < 10)
23     {
24         packageTotals[0] = packageTotals[0] + 1
25     }
26     else
27     {
28         packageTotals[1] = packageTotals[1] + 1
29     }
30     count ++
31 }
32
33 alert("Small packages " + packageTotals[0])
34 alert("Large packages " + packageTotals[1])
```

**Figure 4**



The user inputs the values 4, 12, 9

Complete the table to show the output from lines 33 and 34 of the code.

(2)

Code line	Output
33	
34	

- (b) **Figure 5** shows JavaScript code that displays the name of a tree and its height in metres.

The code includes a subprogram that uses **arguments** and **parameters**.

```

10 function treeDetails(treeName, heightMetres)
11 {
12     alert("Tree name" + treeName + ", " + heightMetres + " metres")
13 }
14
15 treeDetails("Ash", 35)

```

**Figure 5**

Explain, using examples from the code in **Figure 5**, the difference between arguments and parameters.

(2)

.....

.....

.....

.....

(c) Open the file **Q03c.html** in your editor.

It contains JavaScript code that runs when the page loads.

The code repeatedly demonstrates the stages of growth of an apple tree. It uses five images to do this.

The code:

- sets an array containing the filenames of the five images
- sets the image number to 0
- calls the showTrees function
- sets the source of the image to the file name that is stored in the array at the image number index

The code must also:

- check whether the image number is 4
- if the image number is 4 then it must be set to 0
- if the image number is not 4 then it must be incremented by 1

Amend the JavaScript code to complete the showTrees function.

Save your amended code as **Q03cFINISHED.html**

(3)



(d) Open the file **Q03d.html** in your editor.

It contains HTML and JavaScript code.

When the page loads the **displayOff** function must be called.

When the **On** button is clicked the **displayOn** function must be called.

When the **Off** button is clicked the **displayOff** function must be called.

The **displayOff** function must:

- set the source of the bulb image to **off.png**
- hide the **Off** button
- display the **On** button

The **displayOn** function must:

- set the source of the bulb image to **on.png**
- hide the **On** button
- display the **Off** button

Amend the code to implement the requirements.

Save your amended code as **Q03dFINISHED.html**

(4)

(Total for Question 3 = 11 marks)

**TOTAL FOR SECTION A = 31 MARKS**



## SECTION B

You are advised to spend about 120 minutes on this section.

Answer ALL questions in this section.

Answer the question requiring a written response in the space provided.

Some questions will require you to save code in a specified format.

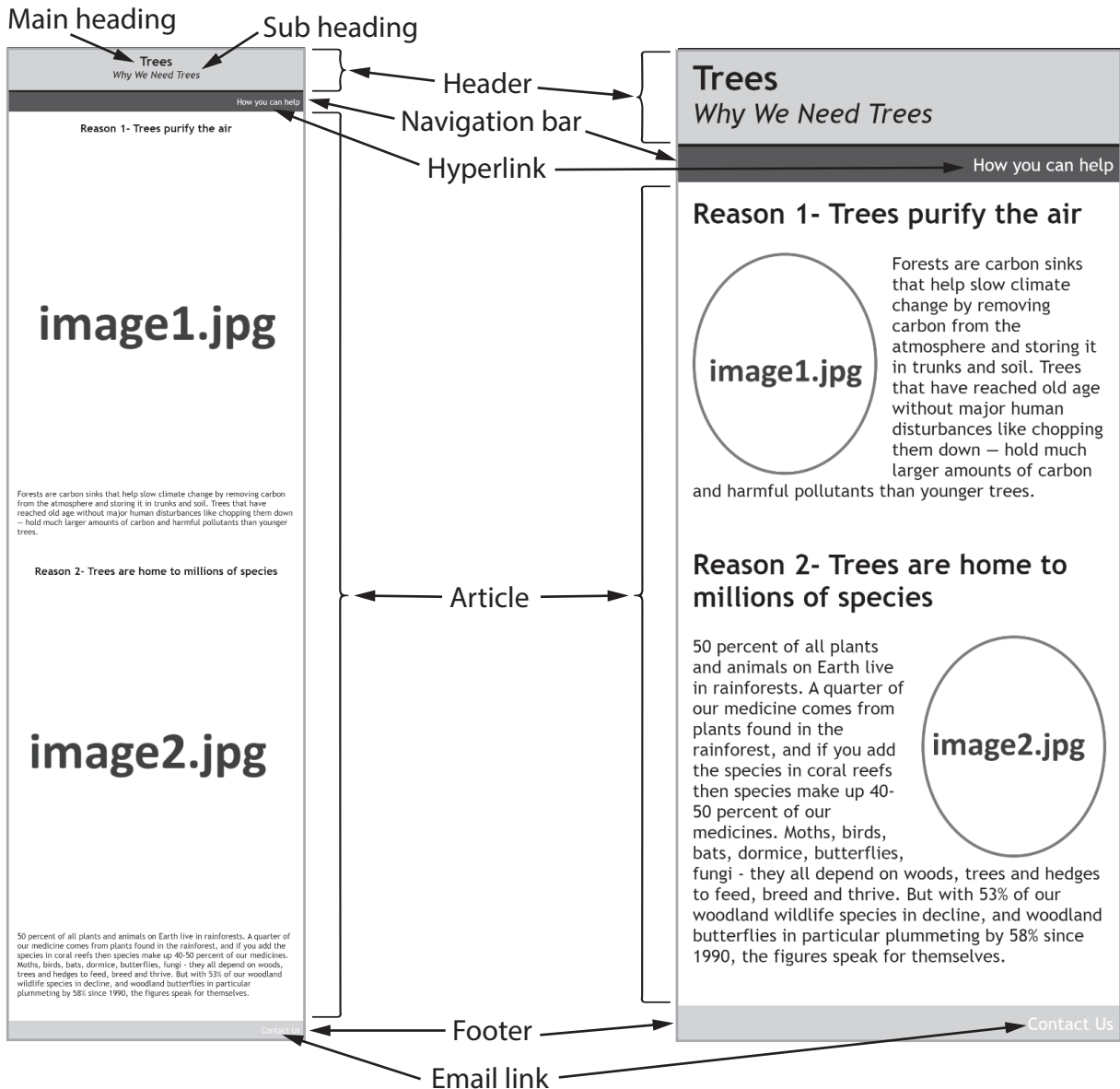
- 4 We Need Trees is a tree conservation volunteer group. It needs a new responsive web page.

Two mock-ups, a style guide and some initial code have been provided. The initial code can be found in **Q04.html** and **Q04.css**

**Figure 6** shows a mock-up for screen sizes less than 600 pixels wide.

**Figure 7** shows a mock-up for screen sizes of 600 pixels or more wide.

PDF versions of the mock-ups can be found in the assets folder.



**Figure 6**

**Figure 7**



## Overall page requirements

- Use HTML5 elements to define the different parts of the page.
- Use a responsive layout with a breakpoint defined to target screens at 600 pixels and above.
- Use Trebuchet MS font style.
- Use an external style sheet.
- Use suitable padding and/or margins.

## Web Design Style Guide – less than 600 pixels wide (Figure 6)

### Header

- Set the background colour to celadon (#ACE1AF).
- Insert the main heading **Trees** as shown.
- Centre-align the main heading.
- Set the font size of the main heading to 26 pixels.
  
- Insert the subheading **Why We Need Trees** as shown.
- Centre-align the subheading.
- Set the font size of the subheading to 20 pixels.
- Italicise the subheading.
  
- Set a top and bottom 4-pixel black border.

### Navigation bar

- Create the navigation bar as shown.
- Set the background colour to midnight green (#004953).
  
- Right-align the text **How you can help** as shown.
- Set the font size to 16 pixels.
  
- Create a hyperlink from the text **How you can help** to the page **help.html**
- Set the font colour of the hyperlink to white (FFFFFF).
- Remove the underline from the hyperlink.

### Article

- Insert the subheadings, images and text as shown. The images and text can be found in the assets folder.
- Centre-align the subheadings.
- Set the font size of the subheadings to 22 pixels.
- Set the font size of the text to 16 pixels.
- Set the width of the images to 100% of the width of the page.

### Footer

- Insert the text **Contact Us** as shown.
- Set the background colour to celadon (#ACE1AF).
- Set the font size to 16 pixels.
- Right-align the text.
- Create an email link from the text **Contact Us** to Dan@WeNeedTrees.jrc
- Set the font colour of the email link to white (FFFFFF).
- Remove the underline from the email link.

## Web Design Style Guide – 600 pixels and over (Figure 7)

### Font sizes

- Set fonts with a size of 16 pixels to 24 pixels.
- Set fonts with a size of 26 pixels to 46 pixels.
- Set fonts with a size of 20 pixels to 37 pixels.
- Set fonts with a size of 22 pixels to 38 pixels.

### Article

- Left-align the subheadings.
- Set the width of both images to 250 pixels.
- Set the images to display as ovals with dark olive green (#556B2F) borders.
- Position the first image to appear to the left of the paragraph of text about trees purifying the air.
- Position the second image to appear to the right of the paragraph of text about trees being home to millions of species.

Develop a prototype responsive web page for We Need Trees using the mock-ups, style guide, images and text provided.

Save your files as **Q04FINISHED.html** and **Q04FINISHED.css**

**(Total for Question 4 = 20 marks)**



## 5 We Need Trees wants to improve the functionality of its website.

It wants to implement:

- a registration page that allows a visitor to register as a volunteer
- a volunteer page that allows a user to select a volunteer and display their name.

All of the required files are supplied in the **Q05** folder.

No additional resources are required.

You only need to add JavaScript and comments to the existing files.

### Registration page

**registration.html** contains an early prototype.

When the **Register new volunteer** button is clicked an automated method must:

- use a regular expression and validation to ensure that the **volunteer name** is input in this format:
  - 1 single uppercase letter
  - followed by 1 or more lowercase letters
  - followed by a space
  - followed by 1 single uppercase letter
  - followed by 1 or more lowercase letters
- use a regular expression and validation to ensure a postcode is input in this format:
  - 2 uppercase letters
  - followed by 1 digit
  - followed by a space
  - followed by 1 digit
  - followed by 2 uppercase letters
- use validation to ensure the age that is input is at least 10
- display the details of a valid volunteer in this format:
  - the words **New volunteer details are**
  - followed by the name of the volunteer
  - followed by the postcode of the volunteer
  - followed by the age of the volunteer.

Complete the prototype.

You must add suitable comments to your code to explain how it works.

Save your file as **registrationFINISHED.html**





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(Total for Question 6 = 9 marks)

**TOTAL FOR SECTION B = 49 MARKS**  
**TOTAL FOR PAPER = 80 MARKS**



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