

Please check the examination details below before entering your candidate information

Candidate surname

Other names

**Pearson Edexcel
International
Advanced Level**

Centre Number

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Candidate Number

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Monday 10 June 2019

Morning (Time: 3 hours)

Paper Reference **WIT12/01**

Information Technology

International 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

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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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P 6 2 7 1 7 R R A 0 1 1 6



Pearson

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 Web pages can use meta tags.

(a) **Figure 1** shows HTML code that contains a meta tag.

```
3 <head>
4   <meta http-equiv="refresh" content="5;URL=http://www.nasa.gov">
5 </head>
```

Figure 1

Explain the purpose of the HTML code on line 4.

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(b) **Figure 2** shows how a list of facts about Pluto should be displayed in a browser.

The HTML code should:

- underline the heading 'All About Pluto'
- make alternate lines italic.

All About Pluto

- There are 8 planets in our solar system.
- *Pluto is classified as a dwarf planet.*
- Some scientists think Pluto contains the ingredients for life.
- *Pluto is made up of mainly rock and ice.*
- Pluto's day is 153.3 hours long.

Figure 2

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

Open file **Q01b.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 **Q01bFINISHED.html**

(2)



(c) The web page shown in **Figure 2** needs to have an audio clip added.

The code must:

- include an HTML5 <audio> tag
- refer to the audio file "space.mp3"
- ensure controls are visible.

Write the HTML code to insert the audio.

(2)

Use this space to write your code.

(d) Web pages can contain external content.

Explain how a tag can be used to add embedded content to a web page.

You must include the name of the tag in your answer.

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(Total for Question 1 = 8 marks)

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2 CSS is used by browsers to format web page content.

(a) A web page contains text that needs to be formatted.

The heading needs to be white and 50 pixels.

Paragraph text needs to be right-aligned with a padding of 20 pixels.

Open file **Q02a.html** page in your editor.

Amend the code to complete the formatting of the text.

Save your amended code as **Q02aFINISHED.html**

(4)

(b) A web page contains images.

The images should fade out to 50% when the mouse cursor hovers over them.

Open file **Q02b.html** page in your editor.

Add CSS code to enable the fade effect.

Save your amended code as **Q02bFINISHED.html**

(2)



(c) **Figure 3** includes the CSS code used to control the appearance of a shape on a web page.

```
3 <head>
4   <meta charset="UTF-8">
5   <title>Q02c</title>
6   <style>
7     .rectangle {
8       width: 300px;
9       height: 100px;
10      background-color: red;
11      border: 2px solid black;
12    }
13
14    .transformation {
15      transform: rotateZ(90deg);
16    }
17  </style>
18 </head>
```

Figure 3

Describe how the CSS code shown in **Figure 3** works with HTML code to position the shape.

You must include line numbers in your description.

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(d) Describe the difference between a parent and a child element.

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(Total for Question 2 = 10 marks)

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3 JavaScript provides interactivity for web pages.

(a) **Figure 4** shows the JavaScript used to calculate the cost of sending a parcel.

```
var weight = prompt("Enter the parcel weight in kg","")
var length = prompt("Enter the parcel length in cm","")

if (weight < 1 && length <= 20){
    alert("This is a letter. The letter rate is £0.65")
} else if (weight < 1 && length > 20) {
    alert("This is a small parcel. Small parcel rate is £3.85")
} else {
    alert("This is a large parcel. Large parcel rate is £9.50")
}
```

Figure 4

Describe how the code works using these input values:

Weight: 0.95

Length: 20

(2)

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(b) Open file **Q03b.html** in your editor.

The JavaScript code creates a drop-down list that displays a small image when an option is selected.

When the small image is clicked, a large version of that image should be displayed in the current browser window.

The JavaScript code is incomplete. This means that the large version of the image is not displayed.

Amend the code so that the large image is displayed.

Save your amended code as **Q03bFINISHED.html**

(4)

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

The JavaScript code contains an incomplete function that should display four images in the slideshow.

The user should be able to view each image by clicking buttons under the images.

Amend the code to complete the HTML and the move function.

The code should:

- display only one image at a time
- have a forward button. When clicked, it shows:
 - the next image
 - the first image after viewing the fourth image
- have a back button. When clicked, it shows:
 - the previous image
 - the fourth image after viewing the first image.

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

(5)



P 6 2 7 1 7 R R A 0 9 1 6

(d) The Document Object Model (DOM) allows JavaScript to change the content of a web page.

One feature of the DOM is that it provides a map of the web page that can be read by JavaScript.

State **two other** features of the DOM.

(2)

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2

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(Total for Question 3 = 13 marks)

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SECTION B

You are advised to spend about 120 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.

- 4 Space Tech is an organisation interested in space and technology. It needs a new web page.

A wireframe and style guide have been provided.

Banner 1000 x 100 pixels

Mars Rover Page

Navigation bar 1000 x 50 pixels

Text area 500 x 500 pixels

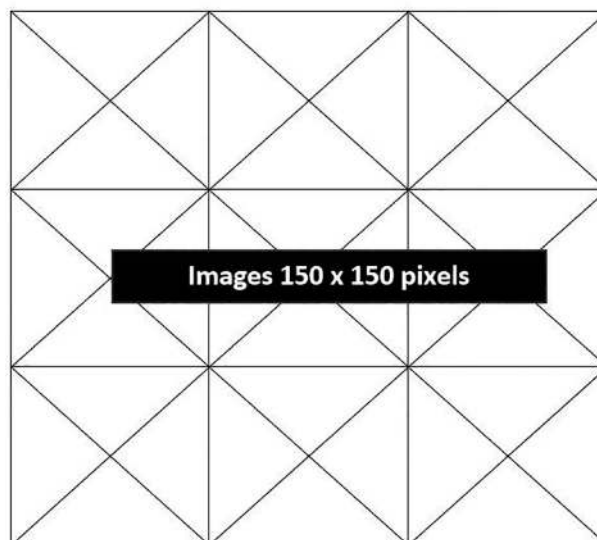
Space is interesting

The sun could hold one million Earths within it. To us this sounds like it is massive. However, it is not. The sun is only an average sized star. There are many more suns in the universe and a lot of them are much, much bigger than our sun.

A lot of people think that there has been life on Mars and that Mars used to be a planet much like our planet. Many think there was water on Mars and that its inhabitants migrated to another planet when it ran out. However, there is no proof of this at all and it could just be wishful thinking on our behalf.

It is amazing to think that our universe may not be the only one. Scientists use the term multiverse to describe this. It would be fun to think there could be a parallel universe – just like ours.

Image area 500 x 500 pixels



Copyright Space Tech

1000 x 50 pixels

Overall page requirements

- Character set must be UTF-8
- Search engines should be able to show a description of the site.
- Use HTML5 elements to define the different parts of the page.
- Use a fixed page layout.
- Use an external style sheet.



Web Design Style Guide

Background

- The background colour of the page should be set to Blue – hex (#0000FF).

Font

- All text should be set to Verdana.
- Colour should be set to Light Grey – hex (#CCCCCC).
- All text should be centre-aligned.

Banner

- Position the banner as shown on the wireframe. The banner image can be found in the assets folder.

Navigation bar

- Create the navigation bar as shown on the wireframe.
- Create and style a hyperlink to open marsRover.html as shown on the wireframe.

Text and images

- Insert the heading 'Space is interesting' as shown on the wireframe.
- Position the text and images as shown on the wireframe. The text and images can be found in the assets folder.
- Set an emphasis on the heading.

Footer

- Insert the text 'Copyright Space Tech'.
- Create an email link on the text to 'info@spacetech.co.uk'.
- Style the text to be Yellow – hex (#FFFF00).

Develop a prototype web page for Space Tech using the wireframe, style guide, images and text provided.

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

(Total for Question 4 = 20 marks)

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5 Space Tech wants to expand the functionality of its website.

It wants to implement:

- a filter that shows information about a selected planet
- a login facility.

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

No additional resources are required.

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

Filter

filter.html contains an early prototype.

Complete the prototype to allow information about the planets to be shown when a user selects an option from the drop-down list.

It must:

- include a placeholder on the box giving the user instructions
- allow the user to select a planet from the drop-down list
- show the information about the selected planet in the box.

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

Save your file as filterFINISHED.html

Login

login.html contains an early prototype.

Complete the prototype.

It must:

- only accept username 'user' and password 'password123' as an authorised user
- if the user is authorised:
 - display a successful login message
 - redirect to success.html
- if the user is not authorised:
 - allow up to 3 login attempts
 - display a suitable error message showing the number of attempts remaining
 - disable the form after 3 unsuccessful login attempts.

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

Save your file as loginFINISHED.html

(Total for Question 5 = 20 marks)



6 The Web Accessibility Initiative - Accessible Rich Internet Applications (WAI-ARIA) can be used to provide additional semantics and improve the accessibility of a web page.

Open file **Q06.html** in your editor.

Read the HTML carefully.

Assess how well semantic code and WAI-ARIA have been used to support accessibility of the web page.

You may use examples from the code and/or line numbers to support your assessment.

(9)

Dotted lines for writing the answer.

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Handwriting practice area with 20 horizontal dotted lines.

(Total for Question 6 = 9 marks)

TOTAL FOR PAPER = 80 MARKS



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