

BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

PRINCIPLES OF INTERNET TECHNOLOGY

Wednesday 22nd April 2026 – Morning

Answer **any** FOUR questions out of SIX. All questions carry equal marks.

Time: TWO hours

Answer any Section A questions you attempt in Answer Book A
Answer any Section B questions you attempt in Answer Book B

The marks given in brackets are **indicative** of the weight given to each part of the question.

Calculators are NOT allowed in this examination.

Section A
Answer Section A questions in Answer Book A

A1.

a) The four principles of the W3C's POUR guidelines on usability are:

- i. Perceivable.
- ii. Operable.
- iii. Understandable.
- iv. Robust.

For **each** principle, provide **two** examples of how it can be implemented.

(8 marks)

b) The uses of the web have changed considerably in the last thirty years. State **one** major development in **each** of the following areas:

- i. Website interaction.
- ii. E-commerce.
- iii. Social communication.
- iv. Browsers.

(8 marks)

c) State the key differences between an intranet and extranet in terms of accessibility, security and purpose.

(9 marks)

A2.

The following is a jQuery plugin:

```
$.fn.changeColour = function (colour) {  
    this.css ("background-colour", colour);  
    return this;  
};
```

- a)
- i. Explain what this plugin will do.
(4 marks)
 - ii. Demonstrate how this code can be used on a div element with the id "my_div".
(4 marks)
 - iii. This code allows for chainability. Define chainability and provide an example of it in the context of the given jQuery code.
(5 marks)
- b) State **three** benefits of using React as a JavaScript library.
(6 marks)
- c) State **three** reasons as to why jQuery simplifies web development.
(6 marks)

[Turn Over]

A3.

a) Write a simple HTML document that includes the following elements:

- i. A title at the top of the page.
- ii. A heading that introduces the page.
- iii. A paragraph describing the purpose of the page.
- iv. An unordered list of at least three items.
- v. A footer with a person's name.

(10 marks)

b) Write CSS rules to style the following:

- i. Change the background colour of the <body> to light blue.
- ii. Set the font colour of all header elements to dark blue.
- iii. Add a padding of 10px to the paragraph elements.
- iv. Change the font style of the list items to italic.
- v. Ensure that the footer spans the entire width of the page.

(10 marks)

c)

- i. Explain how you would make the webpage responsive using CSS.
- ii. Write a media query that changes the font size of the <h1> element to 24px for screens smaller than 600 pixels.

(2 marks)

(3 marks)

Section B
Answer Section B questions in Answer Book B

B4.

- a) Explain how remote login works, including the typical steps involved in establishing a secure remote connection to a system. Include key technologies and/or protocols commonly used in your answer.
(10 marks)
- b)
- i. Describe the **four** key stages in the FTP process between the client and the server.
(4 marks)
 - ii. State the roles of active and passive modes in FTP.
(6 marks)
- c)
- i. Briefly describe the purpose of SSL and TLS in securing network communication.
(3 marks)
 - ii. State **two** key differences between SSL and TLS.
(2 marks)

B5.

- a) State **four** security vulnerabilities that could arise from using a proxy server.
(8 marks)
- b)
- i. Explain the importance of risk assessment in network security.
(3 marks)
 - ii. State **four** components of a network security risk assessment.
(4 marks)
 - iii. How does this process help to protect an organisation's network infrastructure?
(3 marks)
- c) Explain the importance of speed and reliability in a network. Discuss how **both** factors impact the overall performance and user experience of the network.
(7 marks)

[Turn Over]

B6.

- a) Define and explain the Internet of Things (IoT).
(4 marks)
- b) State **three** benefits of using IoT in a household. Provide an example for **each** benefit.
(9 marks)
- c)
- i. Why is Wi-Fi so important in the context of IoT?
(4 marks)
 - ii. State **two** advantages and **two** disadvantages of using Wi-Fi for IoT devices.
(8 marks)

END OF EXAMINATION