

061306T4CPM

COMPUTER PROGRAMMING LEVEL 6

ICT/OS/CP/CR/08/6/A

Develop Client-Side Web Applications

Nov / Dec 2024



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

WRITTEN ASSESSMENT

Time: 3 Hours

INSTRUCTIONS TO CANDIDATE:

1. Marks for each question are indicated in the brackets.
2. The paper consists of **TWO** sections: **A** and **B**.
3. Candidates are provided with a separate answer booklet

DO NOT write on this question paper

This paper consists of FIVE (5) printed pages
Candidates should check the question paper to ascertain that all pages
are printed as indicated and that no questions are missing.

SECTION A (40 MARKS)*Answer ALL the questions in this section*

1. Amidah is learning attributes of a form in HTML. State TWO attributes of a form as used in HTML that he could have learned. (2 marks)
2. Kaboul is using JavaScript to develop a company's website and has added some mouse events in his code. Outline THREE examples of mouse events that he could have added. (3 marks)
3. The load time is the time it takes for a web page to download and display its entire content. State THREE considerations that a web developer should consider to improve the load time. (3 marks)
4. When developing a website, Sanif used a <script> tag in the head section in his HTML document. Outline THREE other tags that he could have added to the head section in his document. (3 marks)
5. A business is planning to launch a new website and needs to select the most suitable programming language for its development. The development team must consider several factors to ensure the chosen language aligns with the project's requirements and goals. Outline THREE key factors that should be considered to ensure the language meets the project's needs and objectives. (3 marks)
6. During A new employee at a digital marketing firm is being trained on the basics of web technology. To help them understand the fundamentals, they need to become familiar with key terms related to websites and browsing. Explain the following terms:
 - a) Web browser
 - b) Home page (4 marks)
7. As a developer, you prefer to use dynamic web pages over other web pages. Outline FOUR advantages of your preference. (4 marks)
8. Abunwasi is having a challenge interpreting the code below, and she has come to you for some assistance. Interpret the following code: (4 marks)

```
function squares(size)
{
    var sqr;
    for (var i = 1; i <= size ; i++)
    (
        sqr = i * i ;
        alert (sqr);
    )
}
```

9. Kapinga a web developer opted to use a WYSISYG editor to develop a website for an organization. Explain THREE reasons for using this type of editor. (6 marks)

10. Andrea intends to develop a user-friendly website. Outline four considerations that he should make to achieve his objectives. (4 marks)
11. Akkuyu has come to you to help her write an HTML code that would display the following listed items on a web browser. Write the code that would display the same on the browser. (4 marks)

INTAKES FOR MONTH OF DECEMBER

- COMPUTER PROGRAMMING LEVEL 6
- COMPUTER SCIENCE LEVEL 5

INTAKES FOR MONTH OF JANUARY

- B. MOTOR VEHICLE
- C. MECHANICAL
- D. ELECTRICAL

SECTION B (60 marks)

(Answer any three Questions in this section)

12. a) A manufacturing company opted to develop a website for advertising their products.
- i. Outline FOUR benefits that the company would derive from the use of the website. (4 marks)
 - ii. Kiki was contracted by the company to host the website; she has a variety of hosting companies that she can choose from. Explain THREE factors that she must consider when making the selection. (6 marks)
 - iii. Kiki was also asked to include images on the website of the products the company is selling. List FOUR types of image file formats that she is likely to use. (4 marks)
- b) Agnes opted to use a web base authoring tool to create a website. Explain THREE benefits that she would gain from this approach. (6 marks)
13. a) You have come across a question in a past paper with the following list of web-based applications:
Jigsaw, Klone, Ms Windows XP, Abyss Web server, Zeus web Server, CorelDraw, Apache Tomcat, Visual basic. From the list, identify those that are used to host web documents on the internet. (2 marks)
- b) Jane is learning JavaScript for the first time. Explain THREE importance of JavaScript that she could have come across. (6 marks)

- c) To ensure the confidentiality, integrity and availability of information in a website, organizations are opting to use various information security control methods. Describe THREE such security control methods. (6 marks)
- d) Onesimus is practicing JavaScript and aims to write a program that prompts a user to enter three numbers. The program should compare the three numbers and display the greatest one in an alert box. Write this JavaScript program. (6 marks)
14. a) Kosgei is facing difficulties understanding the difference between a web page and a web server, and she has asked for your help. How would you explain the distinction between these two terms? (2 marks)
- b) In a web page that you are developing, you have a button that you want to style using CSS with the following characteristics. The button should have a green background color, no border, center text alignment, font size to be 16px, 15px top bottom and 32px left right padding, have no text decoration, an inline block display, and a white color. Write a CSS file that could achieve this. (2 marks)
- c) Mary created a web page and would like to embed a video on it. State FOUR video files formats she is likely to use. (4 marks)
- d) As a developer, you have come across the following statements in HTML. Interpret the statements (6 marks)
- i. `<input type="radio" name="gender" value="male">Gender<br>`
 - ii. `<input type="checkbox" name="sports" value="soccer" checked>Soccer<br>`
 - iii. `Password<input type="password" name="password">`
- e) Peter a web master would like to create a web page having a table of content as follows:
- i. If the text *Chapter 1* in the table of content is clicked, the browser jumps to the section of the page with the text *introduction*.
 - ii. If the text *Chapter 2* in the table of content is clicked, the browser jumps to the section of the page with the text *OSI model*.
- Write the *HTML* code that Peter would use in order to achieve his objective. (6 marks)
15. a) One of the most common uses of event handler is to display a message on the status line when the user moves a mouse over a link.
- i. Write the *HTML* tag to display a link called "order product". (2 marks)
 - ii. Write a *JavaScript* to display the message "order a product" on the status line when a user places the mouse pointer over the order product link in c. i. above. (3 marks)

- iii. Write a *JavaScript* to clear the status line when the user moves the mouse away from the link. (3 marks)
- b) jQuery is a JavaScript library which simplifies JavaScript programming.
 - i. List FOUR jQuery events. (4 marks)
 - ii. Explain FOUR advantages of using libraries like jQuery. (8 marks)