061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/5/6

PERFORM WEBSITE DESIGN

NOV/DEC 2023

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

WRITTEN ASSESSMENT

Time: 3 Hours

INSTRUCTIONS TO CANDIDATE

1. This paper has TWO sections A and B. Attempt questions in each section as per instructions given in the section.
2. You are provided with a separate answer booklet.
3. Marks for each question are indicated in the brackets.
4. Do not write on the question paper

This paper consists of 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 questions in this section.

1. State THREE non-functional requirements that can be considered when coming up with a website. (3 Marks)

2. a) Web authoring tools are used in creating and managing web content. State TWO such tools. (2 Marks)

   b) Outline TWO advantages of the tools listed in (a) above. (2 Marks)

3. Define the term *site map* as used in website maintenance. (2 Marks)

4. When linking a database to a website, the HTTP methods POST and GET are often used to send and retrieve data from the server. These methods have distinct characteristics and are used in different contexts. State TWO differences between the two methods. (4 Marks)

5. Define the following terms as used in HTML; (4 Marks)
   a) row span;
   b) cell span;
   c) cell padding;
   d) cell spacing.

6. A Software Requirements Specification (SRS) document is a comprehensive description of the intended purpose and behavior of a software system. It serves as a reference for software developers, designers, and testers, providing detailed information about the software's functionalities, constraints, and performance requirements. State THREE main parts of a software requirements specifications (SRS) document. (3 Marks)

7. CSS (Cascading Style Sheets) selectors are used to target and style HTML elements based on their attributes, structure, and relationship with other elements. There are several types of CSS selectors. Outline FOUR such selectors. (4 Marks)

8. HTTPS (Hypertext Transfer Protocol Secure) is an extension of HTTP that provides secure communication over a computer network, typically the internet. Explain TWO features of HTTPS that makes a website secure. (4 Marks)

9. Explain the term empty tag as used in HTML. (2 Marks)

10. Using an appropriate example, differentiate between a *Check box* and *Option button* as used in website development. (3 Marks)

11. Performing testing during website maintenance is crucial for ensuring that the website continues to function. Outline FOUR importance of performing such testing.

(4 Marks)

12. Validating user requirements is crucial to ensure that the proposed system or software will meet the needs and expectations of its intended users. Explain THREE techniques are used to validate user requirements. (3 Marks)

SECTION B: 60 MARKS

Answer any THREE questions in this section.

13.

a) Ken was contracted to perform website maintenance of XYZ Company that was having problems. In the process he came up with a website maintenance report. Explain SIX components of a website report. (12 Marks)

b) Protocols and APIs play a crucial role in facilitating data exchange and synchronization between different systems, applications, or databases. Explain FOUR protocols or APIs that can be used for data exchange and synchronization.

(8 Marks)

14.

a) In JavaScript, comments are annotations that used in the web page. Explain TWO advantages of having JavaScript comments in a site. (4 Marks)

b) In HTML Page, style sheets can be inserted into a web page using several methods, allowing developers to apply various styles and layouts to the content. Explain THREE methods that can be used to insert this style sheet. (6 Marks)

c) Write a JavaScript program embedded in HTML that uses an event handler on click to display the word click me, when the word is clicked it displays the string "welcome to JS" on alert box. Use a JavaScript function. (10 Marks)

15.

a) Isaac wrote a code for allowing users to register to a site as displayed in the picture below.

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Register</title>
</head>
<body>
    <form action="indes.php" method="POST">
        <label>Firstname:</label>
        <input type="text" name="firstname" placeholder="ken"><br><br>
        <label>Lastname:</label>
        <input type="text" name="lastname" placeholder="brown"><br><br>
        <label>Email:</label>
        <input type="email" name="email" placeholder="abc.com"><br><br>
        <label>Password:</label>
        <input type="password" name="password"><br><br>
        <button type="submit">Register</button>
    </form>
</body>
</html>
```

Write what will appear if the code is executed in a browser. (10 Marks)

b) Securing a website is critical to protect it from various cyber threats and vulnerabilities. Explain FIVE website security measures that can be taken to ensure that website is secure. (10 Marks)

16.

a) James a trainer was training on coming up with tables in website and displayed the table below. Write the possible code that could have led to the output.

(8 Marks)

	Withdrawn	Credit	Balance
January	250.00	660.50	410.50
February	135.55	895.20	1170.15

b) When creating variables in PHP, it's important to follow certain rules to ensure proper syntax and adherence to best practices. Outline FOUR such rules.

(4 Marks)

c) When selecting a hosting service provider, it's essential to consider several key factors to ensure that the provider aligns with specific requirements and goals. Explain FOUR factors one will consider when selecting a provider. (8 Marks)

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