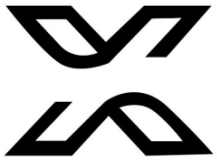

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Date :	Sep-29-2024	**Board / STD**	CBSE / 8
Subject :	Computer Science	**Topic :**	September Test Solutions Cloud Technologies/Computing, HTML, CSS, JavaScript, Basics of Python

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Solutions

Section A: Cloud Technologies/Computing (5 Marks)

Q1. Define Cloud Computing and explain the difference between Public Cloud and Private Cloud.

Answer:

Cloud computing refers to the delivery of computing services (such as servers, storage, databases, networking, software, and analytics) over the internet, enabling users to access these resources without managing the physical hardware directly.

- **Public Cloud:** A cloud environment that is open for use by the general public. It is hosted and managed by third-party service providers, such as AWS, Microsoft Azure, or Google Cloud. The infrastructure is shared among multiple users.
- **Private Cloud:** A cloud environment that is used exclusively by a single organization. It can be hosted on-site or by a third-party service provider but provides more control over security and customization, as the infrastructure is dedicated to a single organization.

Q2. What is SaaS (Software as a Service) in cloud computing? Give one example of a SaaS application and explain how it benefits users.

Answer:

SaaS (Software as a Service) is a cloud computing service model where software applications are delivered over the internet. Instead of installing and maintaining software on their computers, users can access it via the internet, often using a web browser.

- **Example:** Google Workspace (formerly G Suite), which includes apps like Google Docs, Sheets, and Drive.
- **Benefit:** Users do not need to worry about software installation, maintenance, or updates. SaaS applications are accessible from anywhere with an internet connection, making them highly convenient and cost-effective.

Section B: HTML, CSS, and JavaScript (10 Marks)

Q3. Write an HTML code to create a basic webpage that includes:

- A heading with the text "Welcome to My Website"
- A paragraph describing the webpage

Answer:

```
<!DOCTYPE html>

<html>

<head>

    <title>My Webpage</title>

</head>

<body>

    <h1>Welcome to My Website</h1>

    <p>This is a simple webpage created using HTML. It contains a heading and a paragraph.</p>

</body>

</html>
```

Q4. Write the CSS code to:

- Center-align the text of an element
- Set the font size of all paragraph elements to 16px

Answer:

```
/* Center-aligning text of an element */

.element {

    text-align: center;

}


/* Setting font size of all paragraph elements to 16px */

p {

    font-size: 16px;

}
```

Q5. What is the purpose of the `<span>` tag in HTML? How is it different from the `<div>` tag?
Answer:

- **`<span>`** is an inline element used to group text or other inline elements for styling or scripting purposes. It does not add any space or line breaks around the content.
- **`<div>`** is a block-level element that groups content into distinct sections, typically adding a line break before and after it.
  Difference: The `<span>` is inline and does not disrupt the flow of text, while the `<div>` is block-level and creates a separate section.

Q6. Write a JavaScript code to change the text of an HTML element with the ID "heading" to "Hello, JavaScript!" when a button is clicked.
Answer:

```
<!DOCTYPE html>

<html>

<head>

    <title>JavaScript Example</title>

</head>

<body>

    <h1 id="heading">Welcome</h1>

    <button onclick="changeText()">Click Me</button>


    <script>

        function changeText() {

            document.getElementById("heading").innerHTML = "Hello,
JavaScript!";

        }

    </script>

</body>

</html>
```

Section C: Basics of Python (5 Marks)

Q7. Explain what a conditional statement is in Python. Write a Python code that checks if a number is even or odd.

Answer:
A **conditional statement** in Python is used to perform different actions based on certain conditions. The most common conditional statements are `if`, `elif`, and `else`, which allow the program to make decisions and execute code blocks accordingly.

Python code to check if a number is even or odd:

```
# Python program to check if a number is even or odd

number = int(input("Enter a number: "))


if number % 2 == 0:

    print(f"{number} is even.")

else:

    print(f"{number} is odd.")
```

Q8. Write a Python function named `greet_user` that takes a name as an argument and prints "Hello, [name]!" where `[name]` is the input provided by the user.
Answer:

```
def greet_user(name):

    print(f"Hello, {name}!")


# Example usage

greet_user("Alice")
```

END