

COMPUTER STUDIES
Paper 1
(THEORY)

Three hours and a quarter

(The first fifteen minutes of the examination are for reading the paper only. Candidates must NOT start writing during this time.)

This paper consists of **TWO** sections: **Section A** and **Section B**.
Section **A** is **COMPULSORY**. Attempt **ANY FIVE** questions
out of **SEVEN** questions from Section B.

All working, including rough work should be done on the same sheet as the rest of the answer.
The intended marks for questions or parts of questions are given in brackets [].

SECTION A [50 MARKS]
(Attempt ALL questions.)

Question 1

[10 x 1 = 10]

Directions: *Each question in this section is followed by four possible choices of answers.
Choose the correct answer and write it down in the answer sheet provided.*

i. Which of the following is a valid HTML tag?

- A <html> ... </html>
- B <html> ... </html>
- C </html> ... <html>
- D <\html> ... <html>

ii. Which of the following is an EMPTY Tag?

- A <P>
- B <H1>
- C <HR>
- D

iii. Correct way of putting a comment on a web page is

- A <! ... >
- B <! ... !>
- C < ... !>
- D </ ... />

- iv. Find the ODD one out **This booklet contains 12 pages.**
- A Ordered list
 - B Unordered list
 - C Definition list
 - D Undefined list
- v. The attribute which enables you to specify the amount of space inserted between individual cells and table is
- A width
 - B border
 - C cellspacing
 - D cellpadding
- vi. JavaScript was developed by
- A Microsoft Corporation
 - B Netscape Communications Corporation
 - C Intel Corporation
 - D AMD Corporation
- vii. One of the following is NOT a valid HTML editor that works with JavaScript
- A FrontPage
 - B TextPad
 - C HomeSite
 - D MS Word
- viii. Identify the invalid JavaScript variable
- A 2name
 - B Two_name
 - C twoname
 - D _2name
- ix. What will be the output of the following JavaScript statement?
`var result = 5 + 4 * 7 - 10;`
- A 53
 - B 23
 - C 7
 - D 63

- x. Functions MUST be assigned with
 - A parameters.
 - B name.
 - C variables.
 - D all of the above.

Question 2

[10 x 1= 10]

Direction: Fill in the blanks with appropriate words or phrases.

- i. The abbreviation HTML stands for
- ii. displays more than one Webpage on the HTML document.
- iii. The tag element used to provide editable text input area for the user is
- iv. Computers' names and IP addresses connected to the Internet is recorded by
- v. To get SPECIFIC information from the Internet we use
- vi. Variable that store multiple data, items and functions is called
- vii. The statement evaluates an expression and compares the value to one or more **case** clauses.
- viii. are the special code word used inside an HTML tag to control exactly what the tag does.
- ix. Group of JavaScript statements that is treated as a single unit is referred as
- x. statement escapes the loop.

Question 3

[30]

Direction: While answering the questions, indicate briefly, your working and reasoning wherever required.

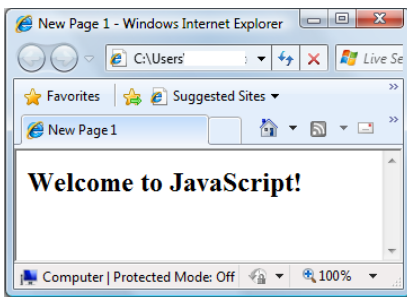
- i. Write tag to insert the image "sch_logo.jpg" which is placed in the folder "image". [2]
- ii. In the body portion of the webpage, you are asked to anchor the text RUB to the website of the Royal University of Bhutan [<http://www.rub.gov.bt>].
Write the complete tag to link the word "RUB" to the website. [2]

- iii. Write HTML code to create a table with the following descriptions:
 - a. 2 rows and 2 columns [1]
 - b. First row should have background colour “Yellow”. [1]
 - c. Width = 50%, Height=50% and Border = 1 [1]

Write the HTML code to generate the following output [appropriate width to be used]. [2]

Please enter your password :

- iv. Show steps to create a Web page using MS Word? [2]
- v. Name TWO most commonly used Search Engines. [1]
- vi. Write the code to link external JavaScript file [java.js] to the HTML document. [2]
- vii. How would you hide JavaScript from the browsers which do not support it? [1]
- viii. Which event handler detects a mouse click? [1]
- ix. Write the JavaScript code to create the output on the Web browser as shown below [2]



- x. `var test = new Array(7);`
 - a. How many elements are there in the above array? [1]
 - b. Write the statement to display middle element of the above Array? [1]
- xi. (a) Which JavaScript Loops check the condition at the end of the loops? [1]
 - (b) Write the JavaScript syntax for the above loop. [1]
- xii. Object “image001” is the child of Object “document” and the Object “document is the child of Object “window”.

Write the above DOM statement in Dot Syntax. [2]
- xiii. Write the JavaScript code to display the larger of two numbers on the Web Browser using built in Math Functions. [2]

xiv. Given below is a HTML containing JavaScript Function:

```
<html><head><title>Calling Function</title></head><body>
<script language=javascript>
    function mySquare(num)
    {
        var sqrOfNo = num * num;
        return sqrOfNo;
    }
</script>
<script language=javascript>
    var result = mySquare(100);
    document.write(result);
</script>
</body></html>
```

(a) Write the statement that has called the function defined in the above code. [1]

(b) What will be the output of the above function? [1]

xv. If “=” in JavaScript is equal to operator used for assigning value to a variable, name this “!=” and state its function? [2]

SECTION B [50 Marks]
Direction: Attempt any FIVE questions.

Question 4

[10]

- a. Internet started as an experimental project by United States Department of Defense in 1969. What was it commonly known as? [1]
- b. Write the HTML code to generate the following output. [4]

Feedback Form:

Your Name :

Your E-mail Address :

Feedback :

- c. Write TWO advantages of JavaScript as an interpreted language. [2]
- d. Study the script given below and answer the questions that follow:

```

<script language = JavaScript>
    var num = new Array(2);           / num Array is being defined here.
    num[0] = "2";
    num[1] = "3";
</script>
```

- a. What is the purpose of inserting comments within JavaScript document? [1]
- b. Are the comments syntax shown above done correctly? If no, rewrite it. [1]
- c. Show the other way of inserting comments in the Script? [1]

Question 5

- a. Define the term “Downloading”. [2]
- b. Write the HTML code to generate the following output. [3]

```

My Study Timetable:
1. Monday, Wednesday, Friday
   o Morning 5 AM - 7 AM
2. Tuesday, Thursday, Saturday
   o Evening 6 PM - 8 PM
    
```

- c. A string variable “myString” is assigned a value “Computer Studies”. What will be the output for myString.substring(5, 12);? [1]
- d. Explain the following terms :
 - i. “Local Variables” [1]
 - ii. “Global Variables” [1]
- e. Write a JavaScript to covert “WE LOVE JAVASCRIPT!!!” to lower case. [2]

Question 6

- a. What is a Web Browser? Give **TWO** examples. [2]
- b. Identify the **ERRORS** and rewrite the following program correctly. [2]

```

<script language= "javascript" type = "type/javascript">
<!--
var 1num = "prompt("Please enter a number", " ");
var sum= 0;
For (i= 0; i<= InputValue; i++)
{
    sum= sum + i
}
document.write(Sum);
-->
</script>
    
```

- c. Write a JavaScript code to display current date and time [4]
- d. Differentiate between Table and Form tags. [2]

Question 7

- a. In HTML documents, **quotations** are displayed in a separate format then rest of the text. Write the syntax for displaying them. [1]
- b. Define the following terms: [2]
- a. Internet
 - b. IP address
- c. How would you view the HTML code of a web page? Write the steps. [1]
- d. Write a JavaScript function “myEvent” for onMouseOver event handler, which would display a text “This is an event!” on the window. [3]
- e. Portion of JavaScript code is given below:

```
var parts = new Array();
parts[0] = "Khaling";
parts[1] = "Higher";
parts[2] = "Secondary";
parts[3] = "School";
var fullname = parts.join(" ");
document.write(fullname);
```

- What will be the output of the above code? [2]
- f. Differentiate between the following variable declarations: [1]
- ```
var num = 100;
var num = "100";
```

**Question 8** [10]

- a. What are the differences between Ordered Lists and Unordered Lists? [2]
- b. You are asked to look for information about the History of 4<sup>th</sup> King of Bhutan in the internet. Write down the steps you would take to find the information using any search engine. [2]
- c. Write the JavaScript to validate the username “Dawa” and mobile No. [8 digits] input by the user. The script should use appropriate alert boxes [6]
- a. to enter username and validate the input
  - b. to enter mobile No. and validate the input
  - c. to display the username and the mobile no.
- [You are required to use “if” and “else” statements]



**Question 9**

- a. Study the HTML code given below:
  - `<a href = http://www.nationalgeographic.org > snake </a>`
  - i. What does the abbreviation “href” stand for? [1]
  - ii. Name the URL referred here. [1]
  - iii. Abbreviation “http” stands for [1]
- b. What does the following domain extension mean? [2]
  - i. .org
  - ii. .com

c. Study the JavaScript code given below :

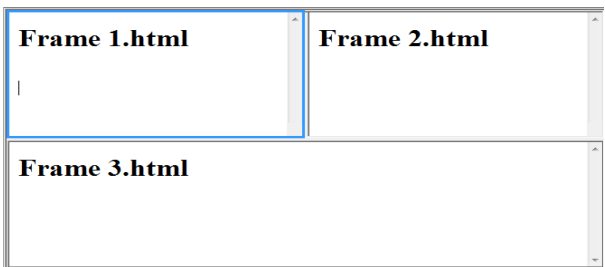
```

while (a > 10)
{
 i++;
 values[i] = 0;
}
```

- i. What type of loop does the above statement create? [1]
- ii. Define this Loop. [1]
- d. Using **for** loop in JavaScript develop multiplication table of 2 [2 x 1 = 2.....]. [3]

**Question 10** [10]

- a. (i) What attribute is used to mark certain point in the webpage so that user can jump to that location directly? [1]
- (ii) Write the complete code for the above mentioned attribute to mark that point in the document/webpage. [1]
- b. Write the HTML code to display nested frameset in the following fashion: [3]



c. Differentiate between Scripting Language and Programming Language. [1]

d. Given below is a JavaScript code for finding the area of a circle whose radius is given:

```
<script language=JavaScript>
 var radius = 21;

 function Area()
 {
 var areaOfCircle = Math.PI * radius * radius;
 return areaOfCircle;
 }

 document.write("The area of circle of radius "+radius+" is "+Area());
</script>
```

In the above program point out the following:

[4]

- i. Global variables used
- ii. Local variables used
- iii. Built in functions
- iv. User defined functions



