UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2021 – 1st Year Examination – Semester 2

IT2406 – Web Application Development I
Multiple Choice Question Paper

(TWO HOURS)

<u>**Important Instructions :**</u>

- The duration of the paper is **2 (two) hours**.
- The medium of instruction and questions is English.
- The paper has **40 questions** and **12 pages**.
- All questions are of the **MCQ** (Multiple Choice Questions) type.
- All questions should be answered.
- Each question will have 5 (five) choices with <u>**one or more**</u> correct answers.
- All questions will carry **equal** marks.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from 0 (*All the incorrect choices are marked & no correct choices are marked*) to +1 (*All the correct choices are marked & no incorrect choices are marked*).
- Answers should be marked on the special answer sheet provided.
- Note that questions appear on both sides of the paper.
  If a page is not printed, please inform the supervisor immediately.
- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**
- Calculators are **not** allowed.
- *All Rights Reserved.*

1) Which of the following HTML code is/are **correct** regarding the "href" attribute?

```
(a) <a href=../people/a.html>
(b) <img href=./image/b.gif>
(c) <frame href=../left.html>
(d) <iframe href=../content/video.html>
(e) <area href="http://www.yahoo.com>
```

2) Which of the following statements is/are **correct** regarding web versions?

I   Web 1.0 is simply an information portal where users passively receive information without being given the opportunity to post reviews, comments, and feedback.
II   Web 2.0 encourages participation, collaboration, and information sharing. Examples of Web 2.0 applications are Youtube, Wiki, Flickr, Facebook, etc.
III   Web 4.0 connects all devices in the real and virtual world in Secondlife 3D social Media.

(a) I Only	(b) II Only	(c) I and II Only
(d) I and III Only	(e) I, II and III.	

3) Which of the following HTML tags description pairs are **correct**?

```
(a) <abbr> - Defines the title of a work
(b) <address> - Defines contact information for the author/owner of a document
(c) <bdo> - Change the text case
(d) <blockquote> - Defines a section that is quoted from another source
(e) <q> - Defines a short inline quotation
```

4) What would be the output of the following HTML code?

```
<bdo dir="rtl">This line will be written from right to left
</bdo>
```

```
(a) University of Colombo School of Computing
(b) gnitupmoC fo loohcS obmoloC fo ytisrevinU
(c) ytisrevinU fo obmoloC loohcS fo gnitupmoC
(d) Computing of School Colombo of University
(e) university of colombo school of computing
```

5) Which of the following HTML code is/are the **correct** use of the "src" attribute?

```
(a) <frame src=../contact.html>
(b) <iframe src=../contact.html>
(c) <link src=../css/template.css>
(d) <a src=../documents/application.docx>
(e) <source src=./video/game.mp4>
```

6) The following is an HTML code with some blanks to embed an audio file.

```
<-(A)- width="320" height="40" -(B)->
   <-(C)- src="a.mp3" -(D)- ="audio/mp3" />
</audio>
```

The correct order of tokens for filling the blanks is

> (a) embed / controls / source / type
> (b) audio / controls / source / type
> (c) audio / type / source / controls
> (d) audio / source / controls / type
> (e) embed / controls / source / type

7) Which of the following HTML statements, including tags, attributes, and values, is/are valid regarding the input form?
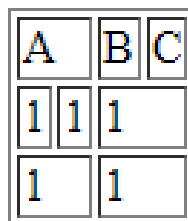
I   `<input type="number" name="points" min="0" max="100" step="10" value="30">`
II   `<input type="date" name="bday" maximum ="1979-12-31">`
III   `<input type="text" name="fname" placeholder="First name">`

> (a) I Only
> (d) I and III Only
>
> (b) II Only   (c) I and II Only
> (e) I, II and III

8) Which of the following HTML tags can be used between the <head> and </head> tags?

> (a) `<title>-</title>,<frameset>-</frameset>,<frame />,<link />`
> (b) `<meta>-</meta>, <frameset>- </frameset>, <frame />,<link />`
> (c) `<style>-</style>, <body>- </body>, <frame />, <link />`
> (d) `<base />, <frameset>- </frameset>, <frame />, <frame />`
> (e) `<p>-</p>, <frameset>- </frameset>, <frame />, <link />`

9) Consider the following HTML code segments and the output shown in the figure below.

```
I    <table border=1>
     <tbody><tr><td>1</td><td>1</td><td colspan=2>1</td></tr>
     </tbody>
     <tfoot><tr><td colspan=2>1</td><td colspan=2>1</td> </tr>
     </tfoot>
     <thead><tr><td colspan=2>A</td> <td>B</td><td>C</td> </tr>
     </thead></table>
II   <table border=1>
     <tr><td colspan=2>A</td><td>B</td><td>C</td></tr>
     <tr><td>1</td><td>1</td><td colspan=2>1</td></tr>
     <tr><td colspan=2>1</td><td colspan=2>1</td></tr> </table>
III  <table border=1><tfoot><tr><td colspan=2>1</td><td colspan=2>
     1</td> </tr></tfoot>
     <tbody><tr><td>1</td><td>1</td><td colspan=2>1</td></tr>
     </tbody>
     <thead><tr><td colspan=2>A</td> <td>B</td> <td>C</td> </tr>
     </thead></table>
```

Which of the above I-III correctly represent the output above?

(a) I Only	(b) II Only	(c) I and II Only
(d) I and III Only	(e) I, II and III	

10) The Following is an HTML code with some blanks to display a bookmark.

```
<body>
    <ol>
        <li><a -(A)- ="#section1" -(B)- ="top">Part A</a></li>
    </ol>
<h1> <a -(C)-="section1">Part A</a></h1> <p>--<a -(D)-="#top"> Top
</a> </p>
</body>
```

The correct order of tokens for filling the blanks is

```
(a) name, name, name, href
(b) href, name, href, href
(c) name, name, href, href,
(d) href, name, name, href,
(e) name, href, name, href,
```

11) Which of the following HTML and CSS code is **correct** regarding the inline CSS style?

```
I    <h1 style: font-size:16px font-type: arial> Colombo </h1>

II   <h1 style= "font-size:16px"; font-type:"arial";> Colombo</h1>

III  <h1 style: "font-size=16px; font-type= arial;"> Colombo </h1>
```

(a) I Only	(b) II Only	(c) III Only
(d) I and III Only	(e) I, II and III	

12) The following embedded CSS code shows the correct syntax of the CSS group selector method.

```
<-(A)- type=" -(B)- "> -(C)- {color:#ccee34 -(D)- font-size:30}
</style>
```

 The correct order of tokens for filling the blanks is

(a) Style / "css/text" / h1,h2,h3,p / ;
(b) Style / "text/css" / h1;h2;h3;p / :
(c) Style / "text/css" / h1 h2 h3 p / ;
(d) Style / "text/css" / h1,h2,h3,p / ;
(e) link / "text/css" / "h1,h2,h3,p" / #

13) What would be the output of the following HTML and CSS code?
```
<html> <head> <style>
    div > p {
        border: medium solid; width:15%;
            }
</style> </head> <body>
<div> <p>Colombo</p> <p>Kandy</p>
    <span><p>Galle</p></span>
</div>
    <p>Nugegoda.</p> <p>Rathnapura</p>
</body> </html>
```


14) Which of the following statements is/are **correct** regarding the "Advantages of Syntactically Awesome Style Sheets (SASS)"?

I   It is a superset of CSS, which helps designers and developers work more efficiently and quickly.

II   As SASS is compatible with all CSS versions, we can use any available CSS libraries.

III It is possible to use nested syntax and useful functions such as color manipulation, mathematics, and other values.

(a) I Only
(b) II Only
(c) I and II Only
(d) I and III Only
(e) I, II and III

15) Select the CSS code output of the following Syntactically Awesome Style Sheets (SASS) code.

```
$border: double;
$color: black;
$width: 680px;
table{border-style:$border; color:$color; border-width:$width;}
```

(a) #table {border-style: double; color: black; border-width: 680px; }
(b) table {border-style=double; color= black; border-width= 680px; }
(c) table {border-style: double; color: black; border-width: 680px; }
(d) table {"border-style: double color: black border-width: 680px" }
(e) table {border-style: "double"; color: "black"; border-width: "680px"; }

16) Select the correct syntax of the @extend selector.

(a) .error{ border:solid1px red;}
    .seriousError{ @extend .error;}
(b) .error{ border:solid1px red; }
    @seriousError{ @extend .error; }
(c) @error{ border:solid1px red; }
    .seriousError{ @extend .error; }
(d) @error{ border:solid1px red; }
    @seriousError{ @extend .error; }
(e) .error{ border:solid1px red; }
    .seriousError{.extend .error; }

17) The following HTML code is to add a new element called **<para>** to an HTML page with some blanks.

```
<head> <script> -(A)-("para") </script> <style type="text/css">
-(B)-{color:#dddddd; } </style> </head> <body> -(C)- Sri Lanka
-(D)- </body> </html>
```

The correct order of tokens for filling the blanks is

(a) <para> / document.createElement / para / </para>
(b) document.write / para / <para> / </para>
(c) document.getElement/ para / <para> / </para>
(d) <para> / document.embeds / para / </para>
(e) document.createElement / para / <para> / </para>

6

18) Select the CSS code output of the following Syntactically Awesome Style Sheets (SASS) code.

```
@mixin atborder($color, $width) {border: $width solid $color; }
.atable {@include atborder(green, 3px); }
.btable {@include atborder(orange, 4px); }
```

(a) .atable{ border: 3px solid green; }.btable {border: 4px solid orange; }

(b) @include.atable{ border: 3px solid green; }
    @include.btable {border: 4px solid orange;}

(c) @mixin.atable { border: 3px solid green; } @mixin .btable { border: 4px solid orange; }

(d) atable { border: 3px solid green; } btable {border: 4px solid orange; }

(e) #atable { border: 3px solid green; }#btable {border: 4px solid orange; }

19) Which of the following statements is/are **correct** regarding the style of the hyperlink in CSS?

I   `a:link{color:yellow; font-size:large}`

II   `a:visit{color:blue; font-size:small}`

III `a:active{color:green; font-size:x-large}`

(a) I Only   (b) II Only   (c) III Only

(d) I and III Only   (e) I, II and III

20) What would the output of the following javascript code be?

```
<html>
    <body onload = checkscope();>
        <script type = "text/javascript">
            <!--
            var x = "global";
            function checkscope() {
                var x = "local";
                document.write(x);
            }
            //-->
        </script>
    </body>
</html
```

(a) local   (b) global   (c) local & global

(d) 0   (e) Error code!

21) Consider the following Java script and its output given below

```
<html> <body> <script type = "text/javascript">
    var (-A-) = 0;
        (-B-) {
            document.write("Number Count : " + count + "<br />");
        (-C-);
        }
      (-D-) (count < 4);
      </script> </body> </html>
```

Output:

Number Count : 0
Number Count : 1
Number Count : 2
Number Count : 3

The correct order of terms for filling the blanks is

(a) while, do, count++, count

(b) do, count, count++, while

(c) count, do, count++, while

(d) count, while, count, do

(e) while, count, count++, do

22) Which of the following statements is/are **correct** regarding the JavaScript "continue" statement?

I   The continue statement tells the interpreter to immediately start the next iteration of the loop and skip the remaining code block

II   When a continue statement is encountered, the program flow moves to the loop check expression immediately

III If the condition remains true, then it starts the next iteration; otherwise, the control comes out of the loop

(a) I Only   (b) II Only   (c) I and II only

(d) I and III Only   (e) I, II and III

23) Which of the following statements is/are **correct** regarding the void operator in JavaScript?

I   The void operator can be useful when calling another function that may have otherwise resulted in an unwanted page refresh.

II   The void does not purposely generate the undefined value.

III If the website uses a <base> element, the link will lead to the URL specified in the <base> element.

(a) I Only   (b) II Only   (c) I and II only

(d) I and III Only   (e) I, II and III

24) Which of the following examples is/are **correct** regarding the JavaScript frameworks and libraries.?

> (a) Angular, React, jQuery, Node
>
> (b) Angular, Laravel, jQuery, Node
>
> (c) Vue, Angular, Laravel, CodeIgniter
>
> (d) Express, React, jQuery, Node
>
> (e) Angular, React, jQuery, Symfony

25) Which of the following statements is/are **correct** regarding the variables in JavaScript?

> (a) The name of the variable is its identifier.
> (b) It must begin with a letter, underscore, or $ sign.
> (c) It cannot begin with a number or other characters.
> (d) JavaScript is not case-sensitive.
> (e) Some examples are test, Test, jam234, _best, $abc, a_1$4

26) Which of the following examples is/are **correct** regarding "Event Handler" in JavaScript?

> (a) onchange, onclick, onmouseover, onmouseout
> (b) onkeydown, onload, OnFocus, OnUnLoad
> (c) OnSelect, OnSubmit, OnReset, onkeydown
> (d) onchange, onclick, onmouseover, onmouseout
> (e) onmouseup, onmousemove, OnDelete, onkeydown

27) Which of the following statements is/are **correct** regarding the "XML Syntax Rules"?

> (a) tags are case-sensitive. The tag <People> is different from the tag <people>
> (b) opening and closing tags must be written with the same case
> (c) elements must be properly nested
> (d) attribute values must always be quoted
> (e) elements can have attributes in name/value pairs, just like in HTML.

28) "XML documents must contain one root element that is the parent of all other elements." The following is an XML program with some blanks to display the root elements:

```
<root> <--A--> <--B-->.....<--C--> <--D-->  </root>
```

The correct order of tokens for filling the blanks is

> (a) `root, subchild, /subchild, /root`
> (b) `subchild, child, /subchild, /child`
> (c) `child, subchild, /subchild, /child`
> (d) `subchild, child, /child, /subchild`
> (e) `/child, subchild, /subchild, root`

29) What is a **correct** way of referring to a stylesheet called "style.xsl" ?

I   `<link type="text/xsl" href="style.xsl" />`
II `<?xml-stylesheet type="text/xsl" href="style.xsl" ?>`
III `<stylesheet type="text/xsl" href="style.xsl" />`

(a) I only	(b) II Only	(c) III Only
(d) I and II Only	(e) I and III Only	

30) Which of the following XML fragments is/are **correct**?

I   `<customer id=1234> <name> John Smith </name> </customer>`
II `<customer id="1234"> <address/> <zip code="234"/> </customer>`
III `<customer id:1234 name:John Smith </customer>`

(a) I only	(b) II Only	(c) III Only
(d) I and II Only	(e) I and III Only	

31) Which of the following statements is/are **correct** regarding Bootstrap?

I   It contains a rich set of pre-defined CSS classes to support the back-end functions of a dynamic web application.
II It was released under GNU General Public License.
III It is a front-end styling framework of web applications.

(a) I only	(b) II Only	(c) III Only
(d) I and II Only	(e) I and III Only	

32) Which Bootstrap class(es) is/are used to create a fixed-width responsive container in a web page?

(a) .container-sm
(b) .container-fluid
(c) .container
(d) .container-md
(e) .container-lg

33) The bootstrap grid system consists of six breakpoints/ classes for different device screen sizes. Which of the following answers shows the **correct** device order for the given breakpoints/ classes below.

sm, lg , md , xs

(a) Desktops, Tablets, Larger Desktops, Phones

(b) Tablets, Larger Desktops, Desktops, Phones

(c) Phones, Tablets, Larger Desktops, Desktops

(d) Larger Desktops, Desktops, Tablets, Phones

(e) Tablets, Desktops, Larger Desktops, Phone

34) Which of the following statements is/are **correct** about Bootstrap CDN (Content Delivery Network)?

I   Bootstrap CDN links use a separate connection to load the content every time.

II   Loading content through CDN links will increase the page/ site loading time.

III Bootstrap CDN makes the loading much faster with caching

(a) I only   (b) II Only   (c) III Only

(d) I and II Only   (e) I and III Only

35) Which of the following classes is used to create an image with rounded corners using Bootstrap?

(a) .img-corner

(b) .round

(c) .img-round-corners

(d) .img-circular

(e) .rounded

36) Which of the following sentences is/are true about Bootstrap Navigation bars?

I   .navbar black class is used to create a dark navigation bar.

II   .pagination class creates the basic pagination.

III .img-thumbnail class adds padding and a grey border to an image to make it a thumbnail.

(a) I only   (b) II Only   (c) III Only

(d) II and III Only   (e) I and III Only

37) Which of the following statements is/are **true** regarding Angular and Node?

I   AngularJS and NodeJS technologies are used for the same purpose.
II AngularJS is a framework that is used to build server-side applications.
III NodeJS is a runtime environment.

(a) I only   (b) II Only   (c) III Only
(d) I and II Only   (e) I and III Only

38) Which of the following sentences is/are **correct** about Node.js?

I   It is based on the Single-threaded Request/Response Stateless model.
II It is a Single-threaded, Event Loop-based model.
III Node has a non-blocking feature.

(a) I only   (b) II Only   (c) III Only
(d) I and II Only   (e) I and III Only

39) Which of the following statements is/are **true** about the Express framework?

I   It supports dynamic rendering of HTML pages.
II It is a proprietary framework maintained by the Node.js foundation.
III It is a back-end development framework for Node.js.

(a) I only   (b) II Only   (c) III Only
(d) I and III Only (e) II and III Only

40) The following code segment is for creating a Bootstrap full-width container which spans over the entire viewport irrespective of the device being used. Which of the following Bootstrap classes should be used to complete the code below?

```
<div class".................................">
</div>
```

(a) container-sm   (b) container-xl   (c) container-xl
(d) container-fluid (e) container

******

12