



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2016 – 1st Year Examination – Semester 1

IT1305 – Web Application Development I
Multiple Choice Question Paper

29th May, 2016
(TWO HOURS)

Important Instructions :

- The duration of the paper is **2 (two) hour**.
- The medium of instruction and questions is English.
- The paper has **50 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 **one or more** 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.**

- 1) Which of the following statements is/are **true** with respect to the Internet?
- | |
|---|
| (a) Internet Protocol address space and the Domain Name System (DNS) are directed by the maintainer organization World Wide Web Consortium (W3C). |
| (b) The Internet is the global system of interconnected mainframe, personal and wireless computer networks that use the Internet protocol suite. |
| (c) The Internet has centralized governance for technological implementation. |
| (d) The Internet has no centralized governance for policies on access and usage. |
| (e) Technically, the terms Internet and World Wide Web refer to the same entity. |
- 2) Which of the following is/are (a) sub domain(s)?
- | | | |
|----------------|----------------|-----------|
| (a) www.bit.lk | (b) .org | (c) co.uk |
| (d) google.com | (e) vle.bit.lk | |
- 3) Which of the following is/are (an) application layer protocol(s) in the Internet protocol suite?
- | | | |
|----------|-----------|---------|
| (a) HTTP | (b) HTTPS | (c) UDP |
| (d) IPv4 | (e) DHCP | |
- 4) Which of the following statements is/are **true** with respect to IP addresses?
- | |
|---|
| (a) Modern networks can only use IPv6 addressing. |
| (b) IPv6 uses 256-bits for addressing. |
| (c) An IP address is a numerical label assigned to each device participating in a computer network that uses the Internet Protocol for communication. |
| (d) 2001:db8:0:1234:0:567 is a typical IPv6 address. |
| (e) 192.168.1.1 is a private IPv4 address. |
- 5) Which of the following is/are **primarily** (a) cloud storage site(s)?
- | | | |
|----------------|------------------|-------------|
| (a) AirBnB | (b) Uber | (c) Dropbox |
| (d) CloudShare | (e) Google Drive | |
- 6) Which of the following is/are (a) protocol(s) related to the World Wide Web?
- | | | |
|---------|----------|----------|
| (a) DOM | (b) HTTP | (c) HTML |
| (d) XML | (e) UDI | |
- 7) Which of the following statements is/are **true** with respect to the ULR <http://www.abc.com/index.html>?
- | |
|---|
| (a) The top-level domain is abc.com. |
| (b) The host name is www. |
| (c) The index.html is the resource being referred to by the URL. |
| (d) http refers to the markup language that should be used by the web browser. |
| (e) If index.html was not available at the URL, the web server would serve the default resource file it is configured to serve. |

- 8) Which of the following is/are (a) mark-up language(s) used in the World Wide Web?
- | | | |
|---------|----------------|---------|
| (a) XML | (b) JavaScript | (c) CSS |
| (d) PHP | (e) HTML | |
- 9) Which of the following is/are (a) container element in an HTML document?
- | | | |
|---------------|-------------|------------|
| (a) <DOCTYPE> | (b) <HTML> | (c) <BODY> |
| (d) <P> | (e) <TABLE> | |
- 10) Which if the following is/are (an) empty element(s) in an HTML document?
- | | | |
|-----------|------------|-------------|
| (a) | (b) | (c) <TITLE> |
| (d)
 | (e) <HR/> | |
- 11) Which of the following statements is/are **true** with respect to HTML5 elements?
- | |
|--|
| (a) The BODY element contains the main content of an HTML document. |
| (b) The TITLE element can be located either in the HEAD or the BODY section of an HTML document. |
| (c) The BODY can include both SECTION and NAV elements, |
| (d) The BODY element may be replaced by the SECTION element in an HTML document. |
| (e) The NAV element is used to navigate from one HTML page to another. |
- 12) Which of the following statements is/are **true** with respect to HTML5 elements?
- | |
|---|
| (a) The HEADER element defines the header section of an HTML document. |
| (b) The FOOTER element defines the footer section of an HTML document. |
| (c) The SECTION element represents a section inside the HEADER of an HTML document. |
| (d) The BLOCKQUOTE element represents long quotations in and HTML document. |
| (e) The TEXT element represents text in an HTML document. |
- 13) Which of the following HTML elements can be used for formatting text?
- | | | |
|------------|-------------|--------------|
| (a) <SUB> | (b) <CODE> | (c) |
| (d) | (e) <LABLE> | |
- 14) Which of the following symbols require special character entities in order to be displayed correctly on an HTML page.
- | | | |
|-------|-------------------------|-------|
| (a) @ | (b) \$ | (c) # |
| (d) < | (e) A non-braking space | |

- A. Use the following HTML5 code to answer question numbers 15 – 21. The file name of this document is Example.html.

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
  <TITLE>Examination Example</TITLE>
</HEAD>
<BODY>
  <H1>Waterfall-model vs. Agile SDLC</H1>
  <P>
    <IMG src="WvsA.png" width="300" height="310" alt="Waterfall vs Agile"
    longdesc="http://www.bit.lk/Software_lifecycles" usemap="#imgmap"/>
    <MAP name="imgmap">
      <AREA shape="rect" coords="20,225,70,250" href="./waterfall.html" />
      <AREA shape="circle" coords="250,50,25" href="./agile.html" />
    </MAP>
  </P>
  <TABLE width="80%" border="1" cellpadding="1">
    <TR>
      <TD>&nbsp;</TD>
      <TD colspan="2">Waterfall</TD>
      <TD colspan="2">Agile</TD>
    </TR>
    <TR>
      <TD width="12%">&nbsp;</TD>
      <TD width="22%">Advantages</TD>
      <TD width="22%">Disadvantages</TD>
      <TD width="22%">Advantages</TD>
      <TD width="22%">Disadvantages</TD>
    </TR>
    <TR>
      <TD rowspan="2">Flexibility</TD>
      <TD>Allows for employee turnover</TD>
      <TD>Very rigid</TD>
      <TD>Saves time and money</TD>
      <TD>User involvement is complex</TD>
    </TR>
    <TR>
      <TD>&nbsp;</TD>
      <TD>Any changes have to start from the beginning</TD>
      <TD>Changes supported even in late development</TD>
      <TD>Reliability could be an issue</TD>
    </TR>
  </TABLE>
  <BLOCKQUOTE cite="http://www.bit.lk/software_lifecycles">
    Both methodologies have their advantages and disadvantages. The characteristics
    of the project would be the main factors that decides which is the best-suited
    methodology to use.
  </BLOCKQUOTE>
  <P>
    <A href="http://www.bit.lk" target="_top">Click here</a> to visit the
    BIT website.
  </P>
</BODY>
</HTML>
```

15) Which of the following captions will be displayed in the toolbar or top of the window of the web browser when Example.html is loaded?

- (a) Waterfall-model vs. Agile SDLC
- (b) Examination Example
- (c) HTML document
- (d) Example.html
- (e) Untitled

16) What action would be invoked if coordinates (50,50) from the top left corner of the image is clicked?

- (a) The browser will go to the address http://www.bit.lk/Software_lifecycles.
- (b) The agile.html page will load.
- (c) The waterfall.html page will load.
- (d) The browser will go to the address http://www.bit.lk/software_lifecycles.
- (e) There will be no action invoked.

17) What action would be invoked if coordinates (260,60) from the top left corner of the image is clicked?

- (a) The browser will go to the address http://www.bit.lk/Software_lifecycles.
- (b) The agile.html page will load.
- (c) The waterfall.html page will load.
- (d) The browser will go to the address http://www.bit.lk/software_lifecycles.
- (e) There will be no action.

18) Which of the following statements is/are **true** with respect to the Example.html document?

- (a) The <blockquote> text would be italic.
- (b) The <blockquote> text would be bold.
- (c) The <blockquote> text would be of a larger font size relative to normal body text.
- (d) The <blockquote> text would be indented from the left relative to normal body text.
- (e) The <blockquote> text would be within double quote marks.

19) Which of the following would be the visual appearance of the table in Example.html in a web browser?

(a)	Flexibility	Waterfall		Agile	
		Advantages	Disadvantages	Advantages	Disadvantages
		Allows for employee turnover	Very rigid	Saves time and money	User involvment is complex
			Any changes have to start from the beginning	Changes supported even in late development	Reliability could be an issue
(b)	Flexibility	Waterfall		Agile	
		Advantages	Disadvantages	Advantages	Disadvantages
		Allows for employee turnover	Very rigid	Saves time and money	User involvment is complex
			Any changes have to start from the beginning	Changes supported even in late development	Reliability could be an issue
(c)	Flexibility	Waterfall		Agile	
		Advantages	Disadvantages	Advantages	Disadvantages
		Allows for employee turnover	Very rigid	Saves time and money	User involvment is complex
			Any changes have to start from the beginning	Changes supported even in late development	Reliability could be an issue
(d)	Flexibility	Waterfall		Agile	
		Advantages	Disadvantages	Advantages	Disadvantages
		Allows for employee turnover	Very rigid	Saves time and money	User involvment is complex
			Any changes have to start from the beginning	Changes supported even in late development	Reliability could be an issue
(e)	Flexibility	Waterfall		Agile	
		Advantages	Disadvantages	Advantages	Disadvantages
		Allows for employee turnover	Very rigid	Saves time and money	User involvment is complex
			Any changes have to start from the beginning	Changes supported even in late development	Reliability could be an issue

20) What would be the table width of the table in Example.html when being displayed in a web browser?

- (a) 80% of the screen width
- (b) 80% of the width of the web browser window
- (c) 800 pixels
- (d) 800 pixels if the display resolution is 1000x760
- (e) 80% of the maximum width of the browser window

21) When the "Click here" link is clicked, the www.bit.lk web page would be loaded in

- (a) a new Tab.
- (b) the same Tab.
- (c) a new Window.
- (d) a new Frame.
- (e) the same Window.

22) Which of the following HTML5 code(s) would display the equation given below on the web browser?

$$x_1 = 5^2 + 2^4 + x_2$$

- (a) `x.sub(1) = 5.sup(2) + 2.sup(4) + x.sub(2)`
- (b) `x<subscript>1</subscript> = 5<superscript>2</superscript> + 2<superscript>4</superscript> + x<subscript>2</subscript>`
- (c) `x₁ = 5² + 2⁴ + x₂`
- (d) `x(sub)1 = 5(sup)2 + 2(sup)4 + x(sub)2`
- (e) `x~1 = 5^2 + 2^4 + x~2`

23) Which of the following HTML5 code(s) would display the text given below on a web browser?

```
<BODY>
"This & That"
x = a-b+4;
</BODY>
```

- (a) `<BODY>
 "This & That"
 x = a−b+4;
 </BODY>`
- (b) `<BODY>
 "This & That"
 x = a−b&plus4;
 </BODY>`
- (c) `<BODY>
 "This & &That"
 x=a-b+4;
 </BODY>`
- (d) `<BODY>
 "This & That"
 x=a-b+4&colon
</BODY>`
- (e) `<BODY>
 "This & That"
 x=a-b+4;
 </BODY>`

24) Which of the following is/are (an) attribute(s) of an Anchor element that can be used to assign (a) value(s) to an email link on a web page?

- (a) mailto
- (b) subject
- (c) receiver
- (d) bcc
- (e) body

- 25) Which of the following element(s) is/are used to provide emphasis aurally for visually impaired people who surf the Web using screen readers?

(a) BOLD	(b) STRONG	(c) ITALIC
(d) DFN	(e) I	

- 26) Which of the following code(s) would display the text given below on a web browser?

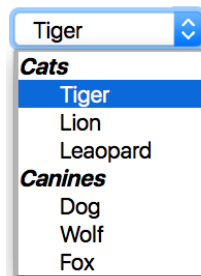
HTML
JavaScript
CSS

(a) <code><ol start="5" type="i">HTMLJavaScriptCSS</code>
(b) <code><ol begin="5" style="i">HTMLJavaScriptCSS</code>
(c) <code><ul begin="4" type="i">HTMLJavaScriptCSS</code>
(d) <code><ol start="4" style="i">HTMLJavaScriptCSS</code>
(e) <code><ul start="5" style="i">HTMLJavaScriptCSS</code>

- 27) Which of the following is/are (an) Input element type(s) in forms in HTML5?

(a) email	(b) password	(c) cancel
(d) login	(e) hidden	

- 28) Which of the following elements is/are required in creating the following drop-down box?



(a) LIST	(b) SELECT	(c) OPTION
(d) GROUP	(e) OPTGROUP	

- 29) Which of the following codes would create a Button with an image by using the image file named “forward-button.png”?

(a) <code><button src="forward-button.png"></button></code>
(b) <code><button type="button"> </button></code>
(c) <code><button type="submit"> </button></code>
(d) <code><button type="button" img src="forward-button.png"> </button></code>
(e) <code><button type="image"> </button></code>

30) Which of the following element(s) is/are required for creating a list of predefined options in a Text field?

- | | | |
|-------------|------------|--------------|
| (a) DATASET | (b) OPTION | (c) DATALIST |
| (d) SELECT | (e) GROUP | |

31) Which of the following elements is/are used to embed a video file in an HTML5 document?

- | | | |
|-----------|-----------|------------|
| (a) EMBED | (b) MEDIA | (c) OBJECT |
| (d) VIDEO | (e) MOVIE | |

32) Which of the following code(s) could be used to apply an external CSS style sheet to an HTML5 document?

- | |
|---|
| (a) <code><link type="stylesheet" src="example.css"/></code> |
| (b) <code><link rel="stylesheet" type="text/css" href="example.css"/></code> |
| (c) <code><link rel="stylesheet" url="example.css"/></code> |
| (d) <code><style type="text/css"> @import url("example.css"); </style></code> |
| (e) <code><style type="text/css"> <import src="example.css"/> </style></code> |

B. Use the following CSS code to answer question numbers 33 – 38. Assume that the following CSS style is applied on an HTML file named Example.html.

```
BODY {
  color:#00FF00;
  background-color:#FF0000;
  font-family:sans-serif;
  background-image:url(bgimage.jpg);
}

H1 {
  font-size:20pt;
}

TABLE {
  background-color:#000000;
  border-style:dashed;
  border-width:medium;
  border-color:#FFFFFF;
  color:#FFFFFF;
}

FORM
{
  background-color:rgba(255,255,255,1.0);
}
```

33) What would be the colour of the text in the Body of Example.html when displayed on a web browser?

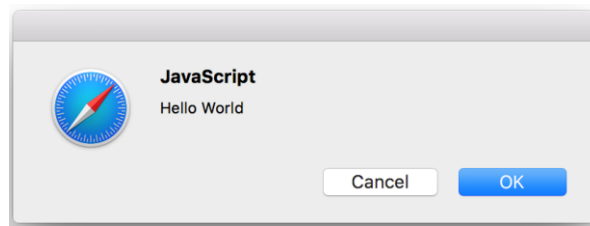
- | | | |
|-----------|----------|-----------|
| (a) Red | (b) Blue | (c) Green |
| (d) Black | (e) Cyan | |

- 34) What would be the background of the Body of Example.html when displayed on a web browser?
- | | | |
|------------------|-------------------------------|-------------------|
| (a) Red colour | (b) One instance of the image | (c) A tiled image |
| (d) White colour | (e) Black colour | |
- 35) What would be the background of any Table of Example.html when displayed on a web page?
- | | | |
|------------------|-------------------------------|-------------------|
| (a) Red colour | (b) One instance of the image | (c) A tiled image |
| (d) White colour | (e) Black colour | |
- 36) What would be the background of any Form of Example.html when displayed on a web page?
- | | | |
|------------------|-------------------------------|-------------------|
| (a) Red colour | (b) One instance of the image | (c) A tiled image |
| (d) White colour | (e) Black colour | |
- 37) What would be the colour of the text inside any table of Example.html when displayed on a web page?
- | | | |
|-----------|-----------|-----------|
| (a) Red | (b) Blue | (c) Green |
| (d) White | (e) Black | |
- 38) Which of the following values may be assigned to the H1 font-size property?
- | | | |
|----------|-------------|----------|
| (a) 200% | (b) medium | (c) 20px |
| (d) big | (e) x-large | |
- 39) Which of the following statements is/are **true** with respect to JavaScript?
- | |
|---|
| (a) JavaScript is non case-sensitive.
(b) The JavaScript interpreter ignores spaces, tabs and new lines.
(c) The semicolon (;) is a must to separate statements in JavaScript code.
(d) JavaScript does not allow a programme to store multiple data types in one variable at different statements.
(e) JavaScript has a set of reserved words. |
|---|
- 40) Which of the following is/are (a) valid identifier(s) in JavaScript?
- | | | |
|---------|--------------|----------|
| (a) Sum | (b) lnumber | (c) _age |
| (d) var | (e) \$number | |
- 41) Which of the following is/are (a) function(s) in JavaScript that can be used to identify if a value is numerical?
- | | | |
|--------------|-------------|----------------|
| (a) Number() | (b) isNaN() | (c) isFinite() |
|--------------|-------------|----------------|

(d) confirm()

(e) eval()

- 42) Which of the following JavaScript functions can be used to create the message box depicted in the figure below?



(a) alert()

(b) confirm()

(c) prompt()

(d) message()

(e) question()

- 43) Let a,b,c and d be JavaScript identifiers. Which of the following JavaScript code(s) is/are syntactically valid?

(a) `a + b(c+d);`

(b) `a + (c+d) / b;`

(c) `a + b*(c-d);`

(d) `a + (b%c) - d;`

(e) `a = b++ c -d;`

- 44) What would be displayed on the web browser when the following JavaScript code is executed?

```
<HTML>
<HEAD>
</HEAD>
<BODY>
<SCRIPT type="text/javascript">
  var v1=100, v2=20, v3=0, v4=50, v5=10, v6;
  v6 = v1 + v2 * (v3*v4+v5);
  document.write("The Value is " + v6);
</SCRIPT>
</BODY>
</HTML>
```

(a) The Value 100

(b) The Value 300

(c) The Value 1200

(d) The Value 0

(e) JavaScript Error

- 45) A level 1 header (H1) has an id value myH1. Which of the following JavaScript codes can be used to change the colour of myH1 to the colour red?

(a) `setElement("myH1").color = "red";`

(b) `document.setElement("myH1").color = "red";`

(c) `document.getElementById("myH1").color = "red";`

(d) `getElement("myH1").style.color = "red";`

(e) `document.getElementById("myH1").style.color = "red";`

- C. Use the following JavaScript code to answer question numbers 46 - 48. Consider that the following JavaScript would be executed on Friday the 23rd of September 2016 at 2.05:10 p.m. in Sri Lanka.

```
<HTML>
<HEAD></HEAD>
<BODY>
<SCRIPT type="text/javascript">
  var today = new Date();
  var hour = today.getHours();
  var minutes = today.getMinutes();
  var month = today.getMonth();
  var day = today.getDay();
  var date = today.getDate();
  var year = today.getFullYear();
</SCRIPT>
</BODY>
</HTML>
```

- 46) What would be the value of the identifier “month”?

(a) September	(b) 9	(c) 10
(d) Sep	(e) 8	

- 47) What would be the value of the identifier “day”?

(a) 23	(b) Friday	(c) Fri
(d) 5	(e) 23rd	

- 48) What would be the value of the identifier “hour”?

(a) 2	(b) 14.05:10	(c) 2.05 p.m.
(d) 2 p.m.	(e) 14	

- 49) Which of the following JavaScript message box functions could be used to request an input value from the user?

(a) alert()	(b) input()	(c) confirm()
(d) prompt()	(e) message()	

- 50) In a JavaScript IF statement, what is the main functionality of the “!=” operator?

(a) Checks if operands are equal
(b) Checks if the operands are not equal
(c) Makes the values of the operands equal
(d) Checks if the types of operands are not equal
(e) Checks if the operands are of the same type
