DESCRIPTION

SUTDENT'S NAME: VARUNSAI. K	
PROGRAM:	**Web design**
DATE: 18/09/2021	
TEACHER'S NAME: SUTHAKAR.P	
COURSE:	**Data Processing Technologies (TTD)**
TYPE OF EXAM:	**Mid-term**
DURATION:	**3 hours**
AUTHORIZED MATERIAL:	**None**

OTHER INSTRUCTIONS FROM THE TEACHER

The exam has **XX5** pages including the cover page. In accordance with the syllabus, the evaluation is worth **XX20** % of the final grade.

Penalties imposed on a student accused of an attempt at plagiarism could include, but are not limited to, a grade of 0% for examination or for the entire course. The student could also be either put on probation, suspended and / or expelled from the program.

OTHER INFORMATION

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Good luck !

Question 1

/3

What is XML used for?

Standing for extensible Markup Language, XML is a markup language used to store and transport data designed to be both human and machine readable. It is utilized to isolate the information from the show. XML is utilized to store the information. It is utilized to structure the information. It is likewise utilized for reloading of information bases. It facilitates the production of HTML reports

Question 2

/3

Using XML tags, write an example illustrating the XML structure.

XML structure:

<root>

<child>

<sub child> </sub child>

</child>

</root>

example:

<?xml version="1.0" encoding="UTF-8"?>

<school>

<name> ST. Thomas high school</name>

<classes> Till twelve </classes>

<medium> English </medium>

<teachers> graduates </teachers>

</school>

/1

What is an XML prolog?

The XML prolog is optional but, if it exists, it must come first in the document and doesn't have a closing tag. To avoid errors, encoding used should be specified (or simply save your XML the file as UTF-8, the default character encoding for XML.

<?xml version="1.0" encoding="UTF-8"?>

It is a segment which is constantly composed toward the beginning of the XML report. It incorporates revelation, type, handling types and so forth.

Question 4

/3

Which of the following tags can't be used in a XML document? (Circle the letter corresponding to your answer)

a) <xmlroot>

b) <myTag>

c) <tag>

d) <item15>

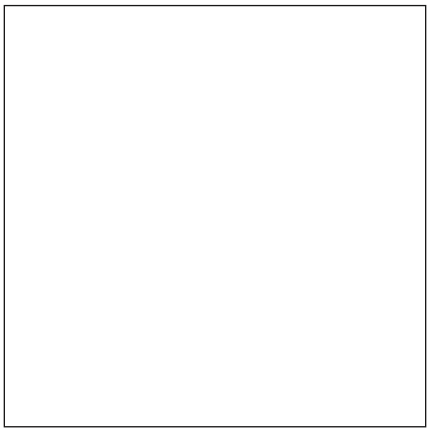
e) None of the above.

Question 5

/5

It is sometimes possible to code elements in two different ways, transforming metadata in data. Re-code the following example to transform metadata in data.

```
<message date="2020-01-22">
<to>Students</to>
<from>Teacher</from>
</message>
```



```
<message>
<date>
<year>2020</year>
<month>01</month>
<day>22</day>
</date>
<to>Students</to>
<from>Teacher</from>
</message>
```

Question 6

/3

Briefly explain what CDATA is used for.

CDATA stands for CHARACTER DATA.CDATA is used when you don't want to parse text or content. It means the content placed between CDATA is not parsed by the parser.

Syntax:

```
<! [CDATA[
Characters won't be parsed here
]]>
```

Question 7

Briefly explain what XSL language is.

XSL stands for Extensible Stylesheet Language, its like CSS, it describes how to display an XML document.

Example: -

XML: - sample XML to format

```
<profile>

<student name="student1">Welcome Student! Start asking questions</student>

<expert name="expert1">Welcome Expert! Start answering questions</expert>

</profile>
```

XSL:- following XSL code formats above XML, make text bold and background color "red" for expert profile

```
<xsl:template match="student">

<fo:block font-weight:"bold">

<xsl:apply-templates/>

</fo:block>

</xsl:template>

<xsl:template match="expert">

<fo:block font-weight:"bold" background-color="red">

<xsl:apply-templates/>

</fo:block>

</xsl:template>
```

Question 8

/3

Briefly explain what the following code lines would actually do.

```
<xsl:for-each select="bookstore/book">
<xsl:sort select="year"/>
```

This "xsl:for-each" tag, iterates through all sub elements <book> under <bookstore> and then you can apply transformation on each book:-

Example:-

XML:-

<bookstore>

<book><name>Game of Thrones</name><price>200$</price><year>2001</year></book>

<book><name>Harry Potter</name><price>50$</price><year>2010</year></book>

</bookstore>

XSL:- following xsl code iterates through the xml and prints book names and year published in the table

<table>

<tr>

<th>Title</th>

<th>Year</th>

</tr>

<xsl:for-each select="bookstore/book">
<tr>

<td><xsl:value-of select="name"/></td>

<td><xsl:value-of select="year"/></td>

</tr>

</xsl:for-each>

</table>

<xsl:sort select="year">
Example:-

XML:-

<bookstore>

<book><name>Game of Thrones</name><price>200$</price><year>2001</year></book>

<book><name>Harry Potter</name><price>50$</price><year>2010</year></book>

```
</bookstore>
```

XSL:- following xsl code will sort the output table by year column

```
<table>
<tr>
<th>Title</th>
<th>Year</th>
</tr>
<xsl:for-each select="bookstore/book">
<xsl:sort select="year"/>
<tr>
<td><xsl:value-of select="name"/></td>
<td><xsl:value-of select="year"/></td>
</tr>
</xsl:for-each>
</table>
```

Question 9

/2

Just like it is mandatory when parsing external files, what is mandatory to parse XML using JavaScript (or jQuery)?

Because there are many ways to parse XML files in JavaScript, we can use DOM parser or SAX parser.

/2

Question 10

Write what language has been used to code the following lines of codes.

```
{
    name : "John
Smith",     age : "43",
    city : "Montreal"
}
```

/5

JSON **language has been used to code the above following lines of codes**

Question 11

Based on the following lines of codes, complete the jQuery code so the DIV would show the result « John Smith is 43 ».

```
<div> </div>

<script>
let data = { "name : "John Smith", "age" : "43", "city" : "Montreal" };
let result = JSON.parse(data);
```

/3

$("div").append(data.name + ' is ' + data.age);

```
</script>
```

Question 12

Retrieving JSON data from an external file, using jQuery, what shorthand method could be used?

you can use following **getJSON** function to read external json files
$.getJSON('external.json', function(json_data){console.log(json_data);});

Question 13

/5

Based on the following JSON data, complete the code so the result showing in DIV would be «Jane Doe»

```
{
    users: [
        {
            one : "John Smith",
            two : "Jane Doe",
        }
    ]
}
```

```
<div> </div>

<script>
$.getJSON('myfile.json', function(data) {

let result = data.users[0].two ;

$("div").append(result);

}
</script>
```