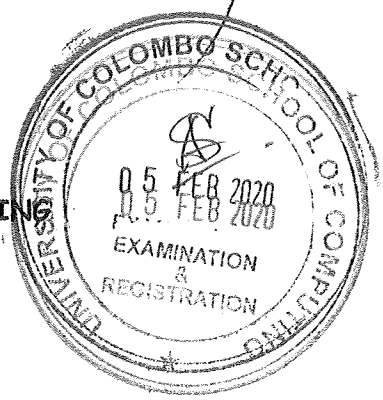
UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

BACHELOR OF SCIENCE IN INFORMATION SYSTEMS



First Year Examination – Semester II – 2019

IS1109 – Programming for Web Application Development

TWO (2) HOURS

To be completed by the candidate

Examination Index No: .....

Important Instructions to candidates:

1. The medium of instruction and question is **English**.
2. If a page or a part of this question paper is not printed, please inform the supervisor immediately.
3. Note that questions appear on both sides of the paper. If a page is not printed, please inform the supervisor immediately.
4. Write your index number on each and every page of the Question paper.
5. This paper has **04** questions across **Part A** and **Part B**.
6. This paper has **04** questions and **16** pages.
7. Students are required to answer both **Part A** and **Part B** in **two hours**.
8. Answer **ALL** questions. There are **03** questions in **Part A** and **01** Question in **Part B** of the paper.
9. Each question will carry equal marks.
10. Any electronic device capable of storing and retrieving text including electronic dictionaries and mobile phones are **not allowed**.
11. Calculators are not **allowed**.

For Examiner's use only	
Question No	**Marks**
1	
2	
3	
4	
Total	

Index No: .....

Part A

Question 1

State whether the following HTML, CSS, and Javascript code segments are syntactically **correct or incorrect**. If they are incorrect, then make necessary changes to correct them.

1.
```
<ol><li><name src="#A" name="top">Part A</a></li></ol>
<a name=#b> <h2>Part 2</h2> </name> <p>- - </p> <a name
=home.html> TOP</a>
```

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2.
```
<frameset   colspan = "200",*,"400" noresize="noresize"> --
</frameset>
```

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3.
```
<head> <base target="_parent" href="home.html"> </head> <body>
<bgcolour="#aaee33" bgsound ="a.wav"/> </body>
```

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4.
```
<figure> <img src="../a/rose.jpg" alt="rose" style="width:100%">
<figcaption>Fig.1 - Rose Flower.</figcaption> </figure>
```

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5.
```
<h1 style="font-type:arial"> Sri <p div style= "font-type:times">
Lanka </p> </div></h1> <p "colour=#ffee33":"font-size:20px";
font-type;"arial">-</p>
```

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Index No: .....

6. `<img src="12.gif" alt="bottle" name ="can" /> <map usemap ="#12"/> <area shape="rectangular" coordinates="(4,36)"; "(60,80)" src="home.html" alt="xxx"> </map>`

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7. `<head><style type="stylesheet/css"> ul li .list {"border-style : double; border-colour : #aa23"} </style></head><body> <ul class=list><li>a</li><li>b</li></ul>`

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8. `<source width="320" height="400" controls> <video embed ="a.avi" type="video"> </source>`

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9. `<head><iframe name="#abc" a href="people.html" width=300 height=200> </iframe></head>`

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10. `<head> h1,h2,h3,p {"font-size=24px; font-color=blue"} </head> <body> <h1 style="colour= blue","font-size=20px"> Colombo </h1>`

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11. `.small-heading {.large-heading;font-size:14px;}`

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Index No: .....

12. `header, section, footer, aside, nav, main, article, figure { display: block;}`

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[24 Marks (2 x12)]

13. `<form> <fieldset> <legend>Personalia:</legend> Name: <input type="text"><br> Email: <input type="text"><br> </fieldset> </form>`

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[1 Mark]

Index No: .....

Question 2:

1. Write down the output of the following HTML and CSS codes

a.
```
<table border="1"> <tfoot>
<tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr>
</tfoot>
<tbody> <tr> <td>1</td> <td colspan="3" rowspan="2">1</td>
<td>1</td> </tr>
<tr> <td>1</td> <td rowspan="2">1</td> </tr>
<tr>
<td colspan="2" rowspan="2">1</td> <td>1</td>
<td rowspan="2">1</td>
</tr>
<tr> <td>1</td> <td>1</td></tr>
<tr>
<td height="32">1</td> <td>1</td>
<td>1</td> <td colspan="2">1</td>
</tr></tbody>
<thead><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td>
</tr> </thead>
</table>
```

[3 Marks]

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b.
```
<p>WWF's goal is to: <q>Build a future where people live in
harmony with nature.</q></p>
```

[1 Marks]

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c.
```
<bdo dir="rtl">Sri Lanka </bdo>
```

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[1 Marks]

d.

```
<html><head>
<style>
div ~ p {
    border: double;
}
</style>
</head><body>
<p>Mango</p><p>Apple</p>
<div>
<p>Banana</p>
</div>
<p>Gamini</p> <p>Orange</p>
</body></html>
```

[2 Marks]

e.

```
<html><head>
<style>
div + h3 {
    border: dotted;
}
</style>
</head><body>
<div>
<h3>Part A</h3> <h2>Part B</h2>
<span><h3>Part C</h3></span>
</div>
<h3>Part D</h2> <h2>Part E</h3>
</body></html>
```

[2 Marks]

f.

```
<html>  <head> <frameset  cols="25%,*,25%" border="3">
<frame name="a" src="a.html" marginwidth="0" marginheight="1"
    frameborder="1">
<frameset  rows="*,25%" border="3">
<frame name="b" src="b.html" marginwidth="0" marginheight="1"
    frameborder="1">
<frame name="c" src="c.html" marginwidth="0" marginheight="1"
    frameborder="1"> </frameset>
<frameset  rows="25%,*,25%" border="3">
<frame name="d" src="d.html" marginwidth="0" marginheight="1"
    frameborder="1">
<frame name="e" src="e.html" marginwidth="0" marginheight="1"
    frameborder="1">
<frame name="f" src="f.html" marginwidth="0" marginheight="1"
    frameborder="1">
</frameset> </frameset> </head> <body> </body> </html>
```

Index No: .....

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[3 Marks]

2. Write down the CSS code output of the following LESS code.

```
$font-stack: arial, times;
$primary-color: #cc33ee;
body {
font: 100% $font-stack;
color: $primary-color;
}
```

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[3 Marks]

3. Write down the output of the following PHP codes

a.
```
<?php
  function calc($price, $tax="")
  {
      $total= $price + ($price * $tax);
      echo "$total";
  }
  calc(42);
?>
```

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[1 Mark]

b.
```
<?php
for($i=1;$i<=3;$i++){
for($j=1;$j<=3;$j++){
echo "$i   $j<br/>";
     }
}
?>
```

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[1 Mark]

c.
```
<?php
$season=array("summer","winter","spring","autumn");
foreach( $season as $arr ){
  echo "Season is: $arr<br />";
     }
?>
```

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[1 Mark]

d.
```
<?php
$i=1;
while($i<=3){
$j=1;
while($j<=3){
echo "$i   $j<br/>";
$j++;
}
$i++;
}
?>
```

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[1 Mark]

e.
```
<?php
for($i=1;$i<=3;$i++){
 for($j=1;$j<=3;$j++){
  echo "$i   $j<br/>";
  if($i==2 && $j==2){
   break;
  }
 }
}
?>
```

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[1 Mark]

f.
```
<?php
function increment($i)
{
    $i++;
}
$i = 10;
increment($i);
echo $i;
?>
```

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[1 Mark]

g.
```
<?php
function increment(&$i)
{
    $i++;
}
$i = 10;
increment($i);
echo $i;
?>
```

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[1 Mark]

h.
```
<?php
function add($n1=10,$n2=10){
$n3=$n1+$n2;
echo "Addition is: $n3<br/>";
}
add();
add(20);
add(40,40);
?>
```

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[1 Mark]

4. Write down whether the following settings are from the Apache or PHP configuration files in the spaces provided to the right.

No	Settings	**Appche or PHP**
(i)	Listen 80	
(ix)	upload_max_filesize = 2M	

[2 Mark]

Index No: .....

Question 3:

The folder structure database, tables and other relevant information of a customer order management system is given bellow. **The server host name, server IP address and database name may change in future**.

Folder Structure:

```
C:\xampp\htdocs\ucsc\index.php
C:\xampp\htdocs\ucsc\error\error.php
C:\xampp\htdocs\ucsc\con\data\data.php
C:\xampp\htdocs\ucsc\con\connection.php
C:\xampp\htdocs\ucsc\admin\user\logoff.php
```

Other Necessary Information:

Web server IP : 192.16.10.10
Your computer IP address that can connect to the Internet : 192.168.1.10
Database server IP: 192.16. 10.10
Database root user password : ucsc
Database Name : CusItem
Table names: Customer, Order and Item

Table 1:Customer

CustomerID	FirstName	LastName	DateofBirth	Gender
w001	Nimali	Perera	4/25/1982	Female
w002	Amal	Kumara	5/25/1985	Male
w003	Gayani	De Silva	7/25/1991	Female
w004	Kasun	Vitharana	8/22/1990	Male

Table 2: Item

ItemNo	ItemName
B001	Anchor
B002	Highland
B003	Nespray

Table 3:Order

CustomerID	ItemNo	NPacks	Price
w002	B001	2	100
w003	B002	3	220
w002	B002	4	270
w003	B003	2	275

Index No: .....

1. Write down the SQL query to create the table "Customer" using the necessary key constraints and data types. The primary key of the Customer table is "CustomerID".

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[3 Marks]

2. The "connection.php" page contains only the code to connect to the database server. Write down the complete PHP coding to fulfill the above requirement and to display the error message in case of a failure.

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[3 Marks]

3. "data.php" holds some necessary information such as values for the variables in "connection.php". Write down the complete PHP code including relevant information for the "data.php" file.

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[3 Marks]

Index No: .....

4. Change the price recorded for the two packs bought by the customer with the customer ID "w002" to "200".

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[3 Marks]

5. Write an SQL Query to retrieve the CustomerID, FirstName and LastName of the customers whose gender is female and list all the details in the alphabetical order considering the LastName of the customer'.

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[3 Marks]

6. Write an SQL Query to list down the CustomerName, NPacks and the price for all the order of the customer whose customer ID is w002.

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[3 Marks]

Index No: .....

7. Write PHP and HTML code to display FirstName, LastName and Gender on the browser of all the customers who have ordered "B002", sorting them according to their "LastName". Use "connection.php" and "data.php" to get the appropriate functionality.

[7 Marks]

Index No: .....

Part B

Question 4

1. Name five important features of CodeIgniter php framework.

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[5 marks]

2. In CodeIgniter, database connection details are stored in "database.php" file. Write down the code to configure default connection with following details. Hint: Use the name $db as the array name.

hostname: localhost
username: admin
password: admin@123
database: employee
dbdriver: mysql

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[5 marks]

Index No: .....

3. Write down the codeigniter urls to call following functions of the "calculator.php" controller. Note that the CodeIgniter site directory name is "ci_site" and it is inside the web root of the Apache webserver running on the same local machine.

```
public function index(){};
public function printAnswer(){};
public function rectArea($width, $height){};
public function circleArea($radius){};
```

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[05 marks]

4. Draw the application flow chart of CodeIgniter using a suitable diagram and briefly describe each step in your own words. Use arrows to indicate the direction of each step properly.

[10 marks]

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