THE CATHOLIC UNIVERSITY OF EASTERN AFRICA
A. M. E. C. E. A

GABA CAMPUS - ELDORET

MAIN EXAMINATION

JANUARY – APRIL 2023

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER AND INFORMATION SCIENCE

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

CMT 209: WEB DESIGN AND DEVELOPMENT

DATE: April 2023	Duration: 2 Hours
INSTRUCTIONS: Answer Question ONE and any other TWO Questions	

Q1.

a) What are **Web Applications**? Why are they becoming so popular? Give some TWO examples.

(2 Marks)

b) Differentiate between the following web programming related concepts:

   i) *Server-side* scripting and *client-side* scripting   **(2 Marks)**

   ii) *Include* and *require*   **(2 Marks)**

   iii) *Packet switching* and *Circuit switching*   **(2 Marks)**

c) i) What is the use of "echo" in php? Show example   **(3 Marks)**

   ii) What is the difference between include and require?   **(3 Marks)**

   iii) Given the below output can you display the php coding for it? **(4 Marks)**

   My first PHP page

   Hello World!

d) i). What is the difference between MySQLi and PHP Data Objects?**(4 Marks)**

   ii). What the difference between Authentication and Authorization? **(3 Marks)**

   iii). What is sql injection?   **(3 Marks)**

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e) Explain the difference between SOAP message and WSDL?   **(2 Marks)**

Q2.
   a) Explain the different errors in PHP?   **(6 Marks)**

   b) How can PHP and JavaScript interact?   **(4 Marks)**

   c) Explain any of the five dimensions of E-commerce Security?   **(10 Marks)**

Q3.
   a) What are the different scenarios under which an xml schema may be used?

                                                              (8 Marks)

   b) Given the coding below can you display the correct output?   **(5 Marks)**

```
<html>
<body>
<form action="welcome.php" method="post">
Name: <input type="text" name="name"><br>
E-mail: <input type="text" name="email"><br>
<input type="submit">
</form>
</body>
</html>
```

   c) Explain how WSDL can bind to SOAP?   **(7 Marks)**

Q4.
   a) How can we optimize or increase the speed of a MySQL select query?

                                                              (8 Marks)

   b) What are the differences between:
       i) mysql_fetch_array()
       ii) mysql_fetch_object()
       iii) mysql_fetch_row()   **(6 Marks)**

   c) What is the correct output for the array below?   **(6 Marks)**
```
<!DOCTYPE html>
<html>
<body>
```

```php
<?php
$cars = array("Volvo", "BMW", "Toyota");
echo "I like " . $cars[0] . ", " . $cars[1] . " and " . $cars[2] . ".";
```

Q5.

a) Identify and correct all errors in the below PHP scripts

    i).
```
$ i = 0;
while($i < 20);
}
echo "Hello There!";
$i++;
```
 (3 Marks)

    ii).
```php
<?php
setcookies("simpleCookie". $name. time()+36000);
?>
```
 (3 Marks)

b) Write a PHP program to compute and print **sum** and **product** of any two given integers. Implement the Graphical User Interface (GUI) to enable capturing of the two numbers from the user. **(6 Marks)**

c) i). How can data be retrieved in the result set of MySQL using PHP?

    (4 Marks)

   ii). What is the difference between var_dump and print_r? **(4 Marks)**

END

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