

PAN AFRICA CHRISTIAN UNIVERSITY

BBIT, BSCIT

END OF TERM EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BSIT 308

CAMPUS: ROYSAMBU

COURSE TITLE: ADVANCED WEB DEVELOPMENT

EXAM DATE: MONDAY, DATE (2ND DECEMBER 2024)

TIME: START HOUR – END 8:00-11:00 HRS

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other THREE questions in Section **B**.
- Write only your **student number** on the answer booklet provided.
- None programmable calculators permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

SECTION A

(Answer ALL questions in this section)

QUESTION 1

- a) Write a JavaScript function that takes a number as input and determines whether it is a prime number. **(4 Marks)**
- b) Explain the output of the code below **(2 Marks)**

```
<?php
$i = 1;
do {
    $j = 1;
    do {
        echo "$i$j ";
        $j++;
    } while ($j <= 2);

    echo "<br>";
    $i++;
} while ($i <= 2);
?>
```

- c) As a security consultant for a web application development team, you are tasked with identifying and implementing measures to prevent common web security vulnerabilities, including cross-site request forgery (CSRF). Discuss **TWO** strategies you would recommend to mitigate the risk of CSRF attacks in the application. **(4 Marks)**

SECTION B

(Answer any THREE (3) questions in this section)

QUESTION 2

- a) Write a Php script using a for loop to print the numbers from 1 to 10, but skip the number 3. **(4 Marks)**
- b) Describe the following terms in web development

(6 Marks)

- i. API
- ii. Middleware
- iii. SSR (Server-Side Rendering)

QUESTION 3

- a) Explain **TWO** roles of the World Wide Web in revolutionizing information sharing

(4

Marks)

- b) Create a webpage using html5,javascript and css3 to display rollovers and responsive navigation bar.

(6 Marks)

QUESTION 4

- a) Explain the use of get and post methods in http, providing relevant examples.

(4

Marks)

- b) Study the php code below and answer the questions that follow

```
<html>
<body>
<?php
$db = mysql_connect("localhost", "root");
mysql_select_db("mydb", $db);
$result = mysql_query("select * from products", $db);
printf("product id: %s<br>\n", mysql_result($result, 0, "product_id"));
printf("product name: %s<br>\n", mysql_result($result, 0, "product_name"));
printf("price: %s<br>\n", mysql_result($result, 0, "price"));
printf("stock: %s<br>\n", mysql_result($result, 0, "stock"));
?>
</body>
</html>
```

Describe the purpose of each of the following statements in the code above **(6 Marks)**

- i. `mysql_connect()`
- ii. `mysql_select_db()`
- iii. `mysql_query()`

QUESTION 5

- a) Discuss the steps followed in setting up a database-driven website using PHP and mysql **(6 Marks)**
- b) Explain **TWO** challenges of using server-side scripting languages like php, asp, or ColdFusion in dynamic web development. **(4 Marks)**

QUESTION 6

- a) Discuss how html5 introduces new semantic elements which are (`<article>`, `<section>`, `<header>`) that provide better meaning and structure to the content compared to html4 and xhtml. **(6 Marks)**
- b) Tom wants to effectively utilize css in his current web development projects to optimize styling and maintain code organization. Discuss **TWO** differences between inline and external css. **(4 Marks)**

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