



PAC INSTITUTE OF TECHNOLOGY AND SOCIAL STUDIES MAY – AUGUST 2025 ASSESSMENT

FORMATIVE ASSESSMENT

Qualification : COMPUTER PROGRAMMING LEVEL 6

Unit of Competency : SERVER-SIDE WEB APPLICATIONS USING PHP

WRITTEN ASSESSMENT TIME: 3 HOURS

INSTRUCTIONS TO THE CANDIDATE:

- 1. Read all the instructions carefully before attempting the questions.*
- 2. This paper consists of two sections, A & B.*
- 3. You are allowed 3 Hours to Answer the questions.*
- 4. Marks for each question are indicated in brackets.*
- 5. Write your responses in the Separate Answer booklet provided.*
- 6. Do not write anything on this question paper.*

SECTION A: (40 MARKS)

*Answer **ALL** questions in this section.*

1. Identify **FOUR** capabilities of PHP as a server-side programming language.
(4 Marks)
2. Comments are essential in programming languages. Identify the three styles you can use comment out sections of your PHP program. (3 Marks)
3. Describe **FOUR** syntax rules one must follow when inserting data in MySQL server database using PHP programming language. (4 Marks)
4. Write a simple PHP script that demonstrates how echo can display the arithmetic sum of two numbers. (4 Marks)
5. As a PHP developer, write, a PHP script that creates a table called 'grades' with any two attributes (3 Marks)
6. Discuss **THREE** advantages of dynamic web site over static web site. (3 Marks)
7. Identify the correct HTML syntax for setting Red as the background colour of your website.
(3 Marks)
8. List **THRE** examples of Web Server software's (3 Marks)
9. Write a user defined function to calculate the workers' pay. The function **ACCEPTS** two arguments representing hours worked and pay per hour. (4 marks)
10. Write a PHP code for connecting web application to the MySQL database server. Include code for testing if the connection is successful. (3 marks)

SECTION B: (60 MARKS)

Answer any **THREE** questions in this section.

QUESTION 11 (20 MARKS)

- a) You are given the following PHP code that is supposed to calculate the area of a circle. However, the code has some errors. Your task is to identify and explain the mistakes in the code, and describe how you would fix them to correctly calculate the area of the circle.

(10

marks)

```
<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $radius = $_POST['radius'];
    if(empty($radius)) {
        echo "Radius is required";
    }
    $area = pi() * $radius * $radius;
    echo "The area of the circle is: " . $area;
}
?>

<form method="POST" action="">
    Radius: <input type="text" name="radius"><br>
    <input type="submit" value="Calculate Area">
</form>
```

- b) Distinguish between `$_POST` and `$_GET` in PHP forms. (4 Marks)
- c) Explain any three PHP superglobals (6 Marks)

QUESTION 12 (20 MARKS)

i. You have been hired by a hotel to develop their **ONLINE BOOKING SYSTEM**. The hotel wants to capture essential information from guests when they make a reservation. Your task is to create a PHP form for a file named **booking.php** that allows users to input the following details for their booking:

- i. Guest Names
- ii. Gender
- iii. Check in Date
- iv. Check out Date
- v. Type of Room (choose from Single, double, master) (15 Marks)

ii. Write the PHP code for a file named **received.php** which receives and prints out the submitted from **BOOKING.PHP** file above. (5 Marks)

QUESTION 13 (20 MARKS)

- i. MySQLi extension is useful when connecting PHP to MySQL Database. Write a PHP script that creates a database called “**shamba**”. (7 Marks)
- ii. As a PHP developer, write a PHP script that creates a table called students with any two attributes. (6 Marks)
- iii. What purpose does the PHP keyword global serve? (2 Mark)

QUESTION 14 (20 MARKS)

a) You are developing a server-side application with PHP that collects personal information from users. Explain **FIVE** legal and regulatory requirements you need to comply with to ensure data protection and privacy. (10 Marks)

b) Describe any **THREE** security considerations a developer should prioritize when connecting a PHP application to a database. (6 Marks)

c) Explain **TWO** ways web developers using PHP can ensure that a database is both secure and

optimized to handle large amounts of data efficiently.

(4 Marks)