

University of Ruhuna- Faculty of Technology
Bachelor of Information & Communication Technology Honours Degree
Level 1 (Semester II) Examination, November/December 2025
Academic year 2023/2024

Course Unit: ICT1233 Server-Side Web Development (Written)

Duration: 2 hours

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- Answer all **Four (04)** questions.

1)

a)

- i) Define PHP and explain its role in web development.
- ii) Write a PHP program that illustrates the distinction between local and global variables through an appropriate example
- iii) List four (04) common PHP super global variables and briefly describe their purposes.

b)

- i) Write a PHP function named `isPerfect($num)` that returns true if the given number is a perfect number, and false otherwise.

Note: A perfect number is one that equals the sum of its proper divisors.

Example: $6 \rightarrow 1 + 2 + 3 = 6$

- ii) According to Wikipedia, Floyd's Triangle is a right-angled triangular array of natural numbers formed by filling each row with consecutive integers, beginning with 1 in the top-left corner. Write a PHP program that uses loop control structures to generate and display the first six (06) rows of Floyd's Triangle.

Sample output for $n = 4$:

```
1
2 3
4 5 6
7 8 9 10
```

2)

a)

- i) Define a multi-dimensional array in PHP and provide an illustrative example.
- ii) Write a PHP script to merge and print the following arrays without using any built-in functions:
`Sarray1 = array("Red", "Green", "Blue");`
`Sarray2 = array("Yellow", "Purple", "Black");`

b)

- i) Explain the difference between returning a value and printing a value in a PHP function.
- ii) State three key advantages of using functions in programming.
- iii) Write a PHP script to perform the following tasks.

- I. Declare a variable \$text and assign it the string:
" PHP is easy to learn and powerful "
- II. Remove whitespace from both ends of the string and print the result.
- III. Print the length of the trimmed string.
- IV. Replace the word "easy" with "simple" in the string and print the result.
- V. Reverse the string and print it.
- VI. Split the string into an array of words and print the array.

3)

a)

- i) Briefly explain three (03) key reasons why **form validation** is important in PHP.
- ii) Write a PHP script that includes the following form to collect a user's email address. The script should:

Enter your email:

- Display the message "Invalid or missing email." if the email field is empty or contains an invalid email address.
- If the email is valid, display the entered email.

b)

- i) Explain the differences between the following file modes in PHP and provide examples for each:
 - I. r
 - II. w
 - III. a
- ii) Write a PHP script to perform the following operations on a file named "Message.txt".

- I. Open the file "Message.txt" in read/write mode.
- II. Write the string "Hello Student" into the file.
- III. Move the file pointer back to the beginning using the rewind() function.
- IV. Write the string "Welcome to PHP Programming" at the beginning of the file.
- V. Read and display the final content of "Message.txt".

4)

a)

- i) List and briefly explain **four (04) uses of cookies** in web applications.
- ii) Write a PHP script to create a cookie that stores a user's **favorite color** with the following specifications:
 - The cookie name should be "favColor".
 - Set the cookie to **expire in 1 hour**.
 - Display a confirmation message showing that the cookie has been set, including the cookie name and its value.
- iii) Mention three (03) main differences between PHP sessions and PHP cookies, focusing on their purpose, storage, and lifespan.

b)

- i) Name and briefly explain **two (02) PHP functions** used to manage sessions.
- ii) You are tasked with developing a simple student login system for a university website. When a student logs in, their name and student ID should be stored temporarily to allow access to personalized pages without requiring repeated logins. Complete the following tasks using PHP:
 - I. Write a PHP script to start a new session when the student logs in.
 - II. Store the following session variables:

Name = "Kamal"

StudentID = "ICT2025"
 - III. Display a welcome message that includes the student's name and ID.
 - IV. Write PHP code to destroy the session when the student logs out.

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