

University of Ruhuna- Faculty of Technology
Bachelor of Information & Communication Technology Honours Degree
Level 2 (Semester I) Examination, June/July 2023
Academic year 2021/2022

Course Unit: ICT2153 Internet Application Development (Written) Duration: 2 hours
Repeat Examination

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

1)

a)

- i) Scripting languages are popular and powerful tools for building web applications. Describe the terms *server-side scripting* and *client-side scripting* which are used as types of scripting.

[10 marks]

- ii) Express three (03) features of PHP as a *server-side scripting language*.

[15 marks]

- iii) Explain the two (02) differences between *static* and *dynamic websites* and discuss the three (03) important points of a dynamic website.

[20 marks]

b)

- i) Provide a PHP script to display the following output using PHP arrays.

Good Bye, Namal
Good Bye, Amal
Good Bye, Kamal
One is for orange
Two is for tea
Three is for water
Four is for rice
Six is for curry

[25 marks]

- ii) State the exact output produced by the following PHP code.

```
<?php
Sa = 4;
Sb = 8;
Sa *= Sb /= Sa;
echo Sa, Sb;
?>
```

[10 marks]

- iii) Give a PHP program to display the *first 15 Prime numbers*.
Hint: A prime number is a number which is only divisible by 1 and itself.
Ex. 2,3,5,7,11...

[20 marks]

2)

a)

- i) PHP allows to call a function by value and reference both. Report three (03) advantages of using *functions in PHP*.

[15 marks]

- ii) *include ()* and *require ()* are two built-in functions available in PHP. Briefly distinguish the usage of *include()* and *require()* with one (01) simple PHP code example for each.

[10 marks]

- iii) Write a PHP function to find the *palindrome* of a given number.
Hint: A palindrome is a number that remains same when its digits are reversed.
Ex. 24142

[20 marks]

b)

- i) Express a PHP code to perform the following tasks.
- Initialise a string variable *\$string* as “ **This’s Jane. Nice to meet, Peter! Please, come here.** ” Then print the variable.
 - Print the number of characters of the content of the *\$string* variable.
 - Print the content of the *\$string* variable in reverse order.
 - Remove whitespaces from both sides of a string variable *\$string* and print it.
 - Split the string variable *\$string* into an array of 3 characters per element of the array and then print the array.

[20 marks]

- ii) Indicate the difference between the PHP methods of *array_pop()* and *array_push()* with one relevant PHP code example for each method.

[20 marks]

iii) Identify the output of the following code.

```
<?php
Sshop = array( array("rose", 1.25 , 15), array("daisy", 0.75 , 25),
array("orchid", 1.15 , 7) );
for (Srow = 0; Srow < 3; Srow++) {
echo "<b>The row number Srow</b>";
echo "<ul>";
for (Scol = 0; Scol < 3; Scol++){
echo "<li>".Sshop[Srow][Scol]."</li>";
}
echo "</ul>";
}
?>
```

[15 marks]

3)

a)

i) **Visibility of Object-Oriented Programming** (OOP) determines the scope in which class members can be accessed. Explain three (03) visibility levels of OOP with a PHP code example.

[20 marks]

ii) Recognize three (03) main features of a **class** in PHP object-oriented programming.

[15 marks]

iii) The “**students**” table created in the “**Cambridge**” database is shown below in Table 01. Suppose you have a database user account with credentials **user name: “root”, password: “1234”** to connect to the MySQL database (“Cambridge”) on the same server running web service.

<i>Index</i>	<i>S_name</i>	<i>S_age</i>	<i>S-city</i>	<i>S_province</i>
S1	Saman Perera	17	Galle	Southern
S2	Gayan Alwis	16	Colombo	Western
S3	Shihan Mihira	15	Kandy	Central

Table 01

Provide a PHP code to perform the following tasks.

- a. Add a new record to the “**students**” table using the below data given in Table 02.

<i>Index</i>	<i>S_name</i>	<i>S_age</i>	<i>S_city</i>	<i>S_provinve</i>
S4	Amal Nuwan	16	Matara	Southern

Table 02.

- b. Update the city of the student whose index is S2 as “**Kalutara**”.
c. Retrieve all the records of the given table “**students**”.

[20 marks]

b)

- i) Identify three (03) *file handling functions* in PHP. Briefly explain their functionalities.

[15 marks]

- ii) Discuss two (02) differences between *GET* and *POST* methods.

[10 marks]

- iii) Suppose you have a file named ‘*textfile.txt*’. Show a PHP code that can perform the following tasks.

- Open the file ‘*textfile.txt*’ in *read/write mode*.
- Write the string ‘*My village is Matara*’ to the file ‘*textfile.txt*’.
- Set the file pointer to 0th position using a *rewind()* function.
- Write the string ‘*My village is not Matara*’ to the file ‘*textfile.txt*’.
- Print the content of the file ‘*textfile.txt*’ on the screen.

[20 marks]

4)

a)

- i) Session variables store user information across multiple pages. Hence, briefly discuss when a *PHP session* can be used.

[10 marks]

- ii) Summarize the *working process of PHP sessions* with a relevant PHP code example.

[15 marks]

- iii) Write down a PHP code to perform the following tasks.

- Declare two session variables, namely ‘*city*’ and ‘*province*’ and then initialize them to “**Colombo**” and “**Western**” respectively.
- Print the stored values in the two-session variables.
- Remove the value from the ‘*province*’ session variable.

[30 marks]

b)

i) A *cookie* is used for various purposes in scripting. Tell what *PHP cookies* are.

[15 marks]

ii) Express two (02) *types of PHP cookies* with their functionalities.

[30 marks]

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