

UNIVERSITY OF RUHUNA
BACHELOR OF SCIENCE GENERAL DEGREE LEVEL III (SEMESTER I)
EXAMINATION – JUNE/JULY 2015

SUBJECT : COMPUTER SCIENCE

COURSE UNIT : COM3113/COM311B (Internet Programming and Web Technologies) TIME : 2 Hours

Answer four (4) questions only.

1.
 - a. Briefly explain the followings.
 - i. World Wide Web
 - ii. Hypertext Transfer Protocol
 - b. ABC advertising company needs to implement online web based system. Customers should be able to visit the website and submit their advertising project to ABC. ABC Company facilitates different advertising projects such as web advertising, paper advertising and email advertising. First, clients should register with the system to handover their projects. Then they have to specify details of the advertisement, payment type and the amount to enter into the project contract. Once ABC Company accepts the project, clients will get an email notification. After that, clients should be able to view the progress of the advertising project through the system.
 - i. Illustrate a sitemap diagram for the proposed system.
 - ii. With the help of a suitable diagram, explain the web-database architecture to the above system.
 - iii.
 - a) List the phases in web designing process.
 - b) Briefly describe three phases listed in 1(b)(iii)(a).
 - iv. Assume one of your friend suggests the following software to implement the above system. Justify his/her selection.
 - a) JavaScript as client side scripting language
 - b) PHP as server side scripting language
 - c) Apache as Web server
 - d) MySQL as Database server

2.

- a. Write down correct HTML tag/attribute to display followings.
- To set inline styles for tags.
 - To list the items with bullets.
 - To display a textarea.
 - To display a checkbox.
- b.
- Write down two methods for sending request-response between a client and the server within a web application.
 - List down three differences between above mentioned methods in 2(b)(i).
- c. Briefly explain the functionality of the followings.
- PHP_SELF
 - \$_REQUEST
 - isset() function
 - extract() function
 - htmlentities() function
- d. Write a suitable HTML code to create the web page in the figure 1.

FEEDBACK FORM

Name

Phone

Sex Male Female

Product

Comment

Figure 1

3.

- List down two web authoring tools.
- Explain the following terms by highlighting the important features of them.
 - CSS

- ii. Client side scripts
- iii. HTML

c.

- i. Briefly explain the two main types of commenting syntax in PHP.
- ii. "Scope of a variable is very important in programming."
Explain the above statement using a suitable example.
- iii. Briefly explain the four types of scopes defined for PHP variables.

d.

- i. Write down the output of the following PHP scripts.

a)

```
<?php
$a = 010;
$b = 0xA;
$c = 2;

print $a + $b + $c;

?>
```

b)

```
<?php
$a = 20;

function myfunction($b) {
    $a = 30;
    global $a, $c;
    return $c = ($b + $a);
}

print myfunction(40) + $c;

?>
```

c)

```
<?php
function modifyArray ($array)
{
    foreach ($array as $value)
    {
        print($value);
    }
}
$array = array (1, 2, 3);
modifyArray($array);
?>
```

d)

```
<?php
$x =25;
while($x<10)
{
    $x--;
}
print ($x);
?>
```

- ii. Write down a PHP program using ternary operator for the following logic.
Logic: If a given number is greater than five display one, else display zero.

4.

a.

- i. What is meant by “phpMyAdmin” ?
- ii. List down two functions of “phpMyAdmin”.

b. Briefly describe the functionality of the following functions.

- i. `mysqli_affected_rows()`
- ii. `mysqli_close()`
- iii. `mysqli_connect_errno()`

c. Write down PHP statement(s) for the followings.

- i. Function and its three arguments to send an email.
- ii. Define a constant named “R” which holds value 10.
- iii. Function that uses to retrieve line of data from a file through a pointer.

- iv. Function that inserts a `
` tag before each newline character in a string while presenting.
 - v. Function that defines a cookie to be sent along with the rest of the HTTP headers.
- d. Write PHP scripts to complete following tasks.

Note: Use procedural style of MySQL library functions.

- i. To connect with a MySQL database server hosted in a machine at "192.248.8.50" using an account which holds "dbuser" as username and "dbpass" as password.
- ii. Assume that connection stated in 4(d)(i) was successful and select all the data values in a table named "student" which resides in the database called "school".
- iii. Assume that the resulted data set in 4(d)(ii) hold in a variable named "\$result". "ST_ID" is the column name of the student table which holds the student identity number. Display all student identity numbers on the browser.

5.

- a. Briefly explain the followings.
 - i. PHP associative arrays
 - ii. Sessions in a web application
 - iii. Cookie in a web application
 - iv. Web Server
- b. Write a PHP script to perform following tasks considering the text "University of Ruhuna".
 - i. Convert the above string to uppercase.
 - ii. Extract only the word "Ruhuna".
 - iii. Calculate md5 hash string for the above string.
 - iv. Write the string to a text file named 1c.txt.
- c. Briefly describe the functionality of the following PHP built-in functions by specifying all their arguments.
 - i. `mysqli_select_db()`
 - ii. `mysql_fetch_array()`

- d. The amounts of money donated by each student for the "Science Day" are given below. Using the concept of array, perform the followings.

12, 34, 45, 34, 48, 35, 15, 87, 40, 68, 34

Note: Do not use built in PHP array functions except `array()`.

- i. Create a PHP array to hold these amounts.
- ii. Using the above 5(d)(i) array, write a PHP script to find the number of students who donated.
- iii. Extend the code in 5(d)(ii) to display minimum amount in the array using a user-defined function.
