UNIVERSITY OF RUHUNA

BACHELOR OF COMPUTER SCIENCE (GENERAL) DEGREE LEVEL II
(SEMESTER II)
EXAMINATION – NOVEMBER/DECEMBER 2016

SUBJECT : COMPUTER SCIENCE

COURSE UNIT: CSC 2233(Internet Programming)   TIME: 2 hours

Answer all four (04) question.

1.

   a.

      i. Write three (03) main features of PHP.

      ii. Write two (02) advantages of server side scripting over client side scripting.

   b. Suppose *$var1* is a variable defined within a function called *func1* and it does not lose its' value when execution leaves the function (*func1*) scope. What is the variable scope of the variable *$var1*?

   c. With the aid of PHP to explain a situation where *variable pass by reference* is important in PHP.

   d.

      i. Write one (01) major difference between *for loop* and *foreach loop* in PHP.

      ii. Write the expected output of the following PHP code segment.

```php
<?php
    $letter = array("A"=>"3", "B"=>"7", "C"=>"10");

    foreach($letter as $x => $x_value) {
        echo "Key=" . $x . ", Value=" . $x_value;
        echo "<br>";
    }
?>
```

2.

  a. Explain the functionality of following array functions using a suitable PHP example code segment.
     i. current()
    ii. next()
   iii. reset()

  b. Create an associative array and insert following data given in table 01 into that array.

Table 01

Name	Physics	Maths	
Saman	70	55	
Kamal	30	50	
Amal	45	55	

  c.
     i. Write the purpose of using default arguments in a function.
    ii. Suppose a function named **Bonus()** has a default argument named *category* where the default value is **"Trainee"**. Write a function signature of **Bonus()** according to the given description.

  d. Write an appropriate PHP in-build function to perform following operations.
     i. Send an email to the given email address with the following information,
- **recipient email- abc@email.com,**
- **message- "Hello"**
- **Subject- "Greetings"**

    ii. Replace every word "*my*" with "*our*" in the string "*my country and my nation*"
   iii. Return a 6-length string from the string "*Welcome All*" starting at the 10th position from the end of the string.
   iv. Break the string "**Hello world, It's a beautiful day**" into an array in each whitespace.

3.

  a.
     i. Discuss a situation where **POST** method is appropriate than **GET** method when processing of data in a HTML form.
    ii. Write the purpose of using *action property* in a HTML form?
   iii. Write the general syntax of the in-build function which is used to determine if a form input variable (ex. button) is set and is not NULL.

b. A proposed web site of a hotel includes *Menu*, *Functions*, *Gallery* and *Contact us* pages to the website. The *Functions* section contains *wedding*, *birthday* and *farewell* categories. The *Gallery* section contains *video* and *photo* categories.

   i. Illustrate the sitemap diagram for the above web development.

   ii. User must submit a form under the *Contact us* section by entering *name*, *email*, *contact number* and *message*. Suppose you have been asked to test the validity of this form.

   Write three (03) test cases you are going to test in this form.

c. Write four (04) information gathering methods in web development process.

d. Select a suitable information gathering method listed in (3)(c) to gather requirements of the proposed system given in (3)(b) and explain how you are going to conduct it.

4.

a. Write two (02) main differences between session variables and cookies in session management.

b. Write appropriate PHP syntaxes to perform following operations.

   i. Start a session

   ii. Add a session variable to store "*userId*" and assign the value *admin* to that variable.

   iii. Remove the session variable created in (4)(b)(ii).

c.

   i. Draw the corresponding DOM structure (tree structure) for the following XML document.

```
<Company>
        <Department id="IT">
                <Staff category=" Technical">
                        <EmployeeId> E002</EmployeeId>
                        <Name>Ruwan Perera</Name>
        </Department>
</Company>
```

   ii. Write the corresponding XML Schema document for the above XML file.

d. Write appropriate jQuery selectors for the following operations.

   i. To select all <a> elements with a target attribute value equal to "_parent"

   ii. To select all elements with an href attribute.

   iii. To select all <button> elements and <input> elements of type="button"

-----------------End-----------------