UNIVERSITY OF RUHUNA

BACHELOR OF COMPUTER SCIENCE (GENERAL) DEGREE LEVEL II
(SEMESTER II)
EXAMINATION – JANUARY 2018

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

Answer all four (04) questions.

1.

   a.

     i. Write the names of 3-tires in a 3-tier web architecture.

     ii. Name the relevant tier which is responsible for rendering a web page, from the answer given in (i).

   b.

     i. Explain the importance of using protocols on a computer network.

     ii. Name the standard protocol which is used for exchanging files on the World Wide Web.

   c. Consider the following URL and answer the following questions.

http://www.abc-com.org/html/home/etc/upload.php?extension=gif

     i. What is the top-level domain of the above URL?

     ii. What is the file type that the URL points to?

     iii. What is the name of the variable used in the above URL?

     iv. Suppose that you need to ensure a secure communication over the browser and the web page that you are access using the above URL. What kind of security method you can apply to accomplish the above task?

   d.

     i. Write the most appropriate loop which you can use when the number of iterations is not known.

     ii. Explain the functionality of the loop you written in 1.d.i, using an example PHP code segment.

2.

a. Write 3 different situations where arrays in PHP can be used in web development.

b. In a supermarket, items are listed as follows,

    Grocery Items
        Rice
        Grams
        Spices
    Frozen Items
        Ice Cream
        Frozen Meats
        Frozen Pastries
        Frozen Fruits
    Drinks
        Tea
        Carbonated Drinks
        Sports and Energy drinks

  i. Create an associative array to store the above items.
  ii. Write a PHP code segment to access the value "Ice Cream" from the above array created in 2.b.i.
  iii. Using PHP in-build functions, write a PHP code segment to get the length of the above array created in 2.b.i.
  iv. Using PHP in-build functions, write a PHP code segment to delete the item "Tea" from the array created in 2.b.i.
  v. Using PHP in-build functions, write a PHP code segment to display the array structure after deleting the item mentioned in 2.b.iv

c. Suppose you are asked to write a small localized throw-away function consisting of a few lines for a specific purpose which has no specific name.
  i. Which kind of function in PHP is most appropriated for the above purpose.
  ii. Write two different ways of creating the function that you mentioned in 2.c.i with a suitable example for each.

d. Consider the string given below to answer the questions. Write appropriate PHP scripts to perform the following tasks.
    "   **protect the planet**   "

  i. Remove the whitespace in the string.
  ii. Convert the first character of each word in the above string into uppercase.
  iii. Get the length of the string.
  iv. Return the last ten characters of the string
  v. Break the string from each whitespace and store in an array.

3.

  a.

    i. Write the PHP super global variable which can use to obtain the variable values passed through a URL.

    ii. Write a suitable code segment from client side to pass following values to test.php, when clicking on "click me" link.

        Name = "Peter"

        Age= "33"

    iii. Write a server-side PHP code segment to display the name and age variable values passed from client script you wrote in 3.a.ii.

  b.

    i. State four main concerns in information gathering phase of a web development process.

    ii. List three information gathering methods which you can used in web development process.

  c. The following PHP code is a partial implementation of the Employee class.

```php
<?php
    class Employee{
        var $name;
        var $idNo;
        ........

    }

?>
```

    i. Complete the above class implementation using constructor concept to initialize name and the idNo of an employee.

    ii. Instantiate two objects named employee1 and employee2 with the Employee class created in 3.c.ii.

  d. Explain how method overloading is achieved in PHP using a suitable example.

4.

a. Write two situations where sessions and cookies are important in web applications.

b. Write appropriate PHP syntaxes to perform following operations.
   i. Create a cookie to store the name of a current user with an expiration time of an hour.
   ii. Retrieve full list of created cookies.
   iii. Remove the cookie created in (4)(b)(i).

c.
   i. Define a suitable Document Type Declaration (DTD) to describe the details in table 01.

Customer Information	
Name	A. Perera
Address	10A,Park Rd, Matara
Contact	0123456789
Package Information	
Weight	0.25g
Type	Documents
Payment	Rs.1250.00

Table 01- Shipment Information

   ii. Write a XML document to display the shipment information given in table 01.

d. Suppose you are asked to write a jQuery function to *hide if elements are already shown and show if elements are already hidden* when moving mouse pointer over an object.
   i. Write the name of the most appropriate jQuery method that you can use to fulfill the above requirement.
   ii. State the most appropriate Document Object Model (DOM) event to write the above function.

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

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