TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

Select department

UNIVERSITY EXAMINATION FOR:

INSTITUE OF COMPUTING AND INFORMATICS
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
BACHELOR OF SCIENCE IN MATHEMATICS AND COMPUTER SCIENCE
(BTIT/SEP 2013 Y3S1-JFT/BMCS 12S Y4S2)
EIT 4310/EIT 4453: Advanced Web Application Programming Exam 1

END OF SEMESTER EXAMINATION

SERIES:APRIL2016

TIME:2HOURS

DATE:Pick DateMay2016

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of Choose No questions. AttemptChoose instruction.
Do not write on the question paper.

Question ONE

a. Differentiate between client side and a server side programming   [2 marks]

b. Explain what you understand by Model View Controller pattern as used in web applications.
                                                                          [5 marks]

c. Describe what you understand by a PDO class   [2 marks]
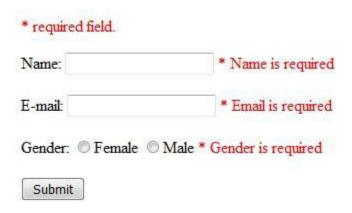
d.   Differentiate between GET, e POST and REQUEST methods   [6 marks]

e.   Describe how AJAX speeds up server responses to requests   [5 marks]
f. Describe three merits of using MYSQL database over other database programmes. [3 Marks]
g. The form below has three fields: First Name, Last Name and Age. Write a non-validated PHP script that can
    post the three form content to a database   [7 Marks]

First Name: [_____]   Last Name: [_____]   Age: [_____]   [Submit Query]

Question TWO

a) Define the term "prepared statement"   as used in PHP   [2 marks]
b) Explain how prepared statements work   [6 marks]
c) Describe three advantages of using prepared statements in PHP/MYSP queries [6 marks]

d) Write an PHP/MSQL statement that uses a prepared statement   [6 marks]

Question THREE

a. Write a PHP script to check if a string contains specific string?   [4 marks]

Sample string: 'The quick brown fox jumps over the lazy dog.'
Check whether the said string contains the string 'jumps'.

b. Explain the behavior of the htmlspecialchars () function   [3 mark]

c. Describe the actions of the $_SERVER["PHP_SELF"] variable   [3 marks]

d. Write a PHP/MYSQL script that selects the id, firstname and lastname columns from the students table and displays it on the page as follows.   [10 marks]

id: 1 - Name: John Kamau
id: 2 - Name: Mary Mwajuma
id: 3 - Name: Julie Odoyo

Question FOUR.

a. Describe three variable scopes used in PHP   [3 marks]

b. Write an HTML syntax for the web form below   [7 marks]

Name: [_____]

E-mail: [_____]

Gender: ○ Female ○ Male

[Submit]

c. Write the validation script for the form to display the form as shown if the form is submitted empty
[10 marks]

```
* required field.

Name:                    * Name is required

E-mail:                  * Email is required

Gender:  ○ Female  ○ Male * Gender is required

Submit
```

Question FIVE

a. Define the following PHP terms/Phrases   [6 marks]

    i.   Polymorphism
    ii.   Data Abstraction.
    iii. Encapsulation
    iv. Constructor

b. Here is a PHP code extract which defines a class of type Books:

```php
<?php
  class Books {
    /* Member variables */
    var $price;
    var $title;

    /* Member functions */
    function setPrice($par){
      $this->price = $par;
    }
      function getPrice(){
      echo $this->price ."<br/>";
    }

    function setTitle($par){
      $this->title = $par;
    }
      function getTitle(){
      echo $this->title ." <br/>";
```

```
    }
  }
?>
```

i. Explain five key parts of the code. 5 marks]

ii. Demonstrate how to create three books: maths, physics and chemistry using the **new** operator.

[3 marks]

iii. Show how to set title and prices for the three books by calling member functions. [6 marks]