



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

Select department

UNIVERSITY EXAMINATION FOR:

INSTITUTE 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:

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

- 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**

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
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]