

# UNIVERSITY OF ESWATINI



FACULTY OF SCIENCE AND ENGINEERING  
DEPARTMENT OF COMPUTER SCIENCE

## Main Examination

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Course Name: Web Technology and Development  
Course Code: CSC 433  
Time allowed: Three (3) Hours

### INSTRUCTIONS TO CANDIDATES

- 1) Answer **ALL** questions in **Section A**.
- 2) Choose any **two (2)** questions in **Section B**
- 3) This examination consists of **five (5)** printed pages.
- 4) This examination paper should **NOT** be opened until permission has been granted by the invigilator
- 5) The number of marks per each question is written at the end of each question

## SECTION A- 60 Marks

### Question 1

- a) Describe the difference between Rich Internet Applications (RIA) and Web-Oriented Architecture (WOA). **[6 marks]**
- b) Explain the difference between TCP and UDP. **[4 marks]**
- c) Compare and contrast `$_POST []` and `$_GET[]` as PHP form methods **[6 marks]**
- d) With the aid of relevant examples, describe **two (2)** types of Domain Name extensions. **[4 marks]**

### Question 2

- a) Describe the difference between each pair of the following protocols:
- i) HTTP vs HTTPS
  - ii) POP vs POP3
  - iii) FTP vs TFTP
  - iv) SMTP vs SNMP. **[8 marks]**
- b) Compare and contrast Client/Server architecture and Peer-to-Peer architecture as web architectures. **[8 marks]**
- c) Describe the difference between URL parameter and URL fragment **[4 marks]**

### Question 3

- a) Explain why web Caching is important in the era of the Internet of Things **[8 marks]**
- b) With the aid of relevant examples, describe Web Cache Replacement algorithms with respect to web objects characteristics **[12 marks]**

## Section B - Choose any TWO(2) Questions

### Question 4

a) Write HTML code to output the HTML login page shown in **Figure 1** below.

[10 marks]

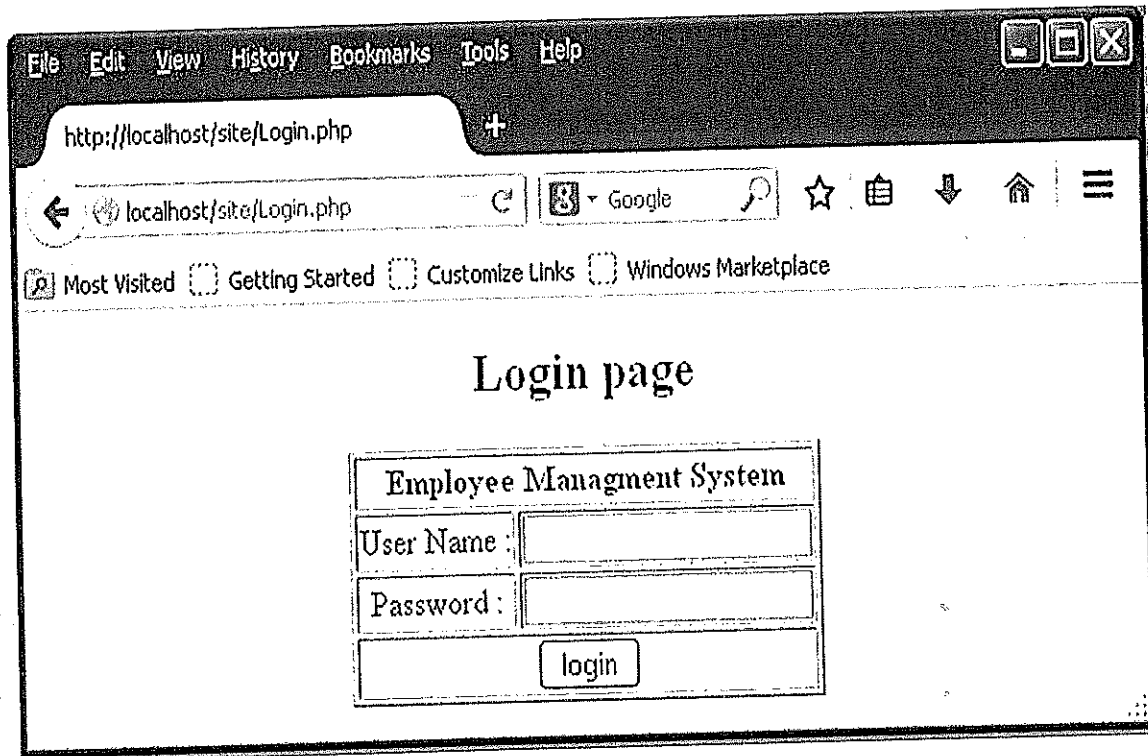


Figure 1. HTML Login page

b) Given that a database called **Employee** with a table name called **users**, with three columns namely; **userid**, **username** and **password**. Write a PHP MySQL code that authenticates system users. If the username and password matches, the script should output a confirmation message, otherwise, username and password do not match.  
[10 marks]



**Question 6**

- a) Write HTML code to output the HTML Alumni Registration Form shown in Figure 2 below. **[10 marks]**

**Alumni Registration Form**

Enter Name :	<input type="text"/>
Enter Phone Num :	<input type="text"/>
Select Gender :	<input type="radio"/> Male <input type="radio"/> Female
Enter Address :	<input type="text"/>
Select City :	Manzini <input type="button" value="v"/>
Uneswa Education :	<input type="checkbox"/> BSc
	<input type="checkbox"/> BBA
	<input type="checkbox"/> BA
	<input type="checkbox"/> BSc Comp.Ed
	<input type="checkbox"/> BCOM
	<input type="checkbox"/> BEng
	<input type="checkbox"/> BScIT
	<input type="checkbox"/> MBA
	<input type="checkbox"/> PhD
<input type="button" value="Submit"/>	

**Figure 2. Alumni Registration Form**

- b) Write a PHP code that displays the data entered in the Alumni Registration Form in Figure 2. The registration details are shown in Figure 3. **[10 Marks]**

<b>REGISTRATION DETAILS</b>	
Name :	John Mike
Phone :	78246653
Gender :	MALE
Address :	jmike@gmail.com
City	Manzini
Educational Qualification :	BScIT

**Figure 3. Alumni PHP code Output**