

CHUKA

UNIVERSITY



UNIVERSITY EXAMINATIONS

RESITS/SPECIAL EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF CERTIFICATE IN
COMPUTER SCIENCE**

COSC 00104: WEB PROGRAMMING AND ADMINISTRATION

STREAMS:

TIME: 2 HOURS

DAY/DATE: MONDAY 28/8/2023

8.30 A.M. – 10.30 A.M.

INSTRUCTIONS:

- Answer Question ONE and any other TWO Questions
- Do not write anything on the question paper

Question One (30 Marks)

(a) “System status should be visible”;

i) Explain what is meant by the above heuristic. (4 marks)

ii) Give examples of how you could design your web application to meet heuristic above. (4 marks) (b)

Write a script code that can be used to test PHP parser installation (2 marks)

(c) List Four editors that can be used in web programming. (4 marks)

(d) Differentiate between single line comment and multiple line comment while giving example in each case.” (4 marks)

(e) Explain the contribution of W3C to web developers and designers. (6 marks)

(f) Write a PHP code that could be used to connect to a MySQL database named ‘**simpledb**’ given

the MySQL server username and password are ‘**root**’ and ‘**pswd123**’ respectively.(6 marks)

Question Two (20 marks)

(a) Write MySQL commands to perform the following:

- (i) Create a database named **Article**. (1 mark)
- (ii) Create a table **Book** with the data types listed below. (4 marks)

Fields	Data Types	Length		Attributes
Book_id	int	2	Primary Key	Not null
Book_name	varchar	13		Not null
Author	char	10		Null
Pages	int	3		Not null

- (iii) Insert the first **TWO** records to the table **Book**. (6 marks)

Book_id	Book_name	Author	Pages
1	The Moonstone	W.Collins	671
2	Pride and Prejudice	J. Austen	500
3	Coral Reefs	C. Darwin	231
4	Beast and Super Beasts	H.H.Munro	1200

- (iv) Display all records in the table above. (1 mark]

(b) Explain **FOUR** disadvantages of using MySQL as a database for web applications. (8 marks)

Question Three (20 marks)

(a) State and explain in details **TWO** strategies that web administrators use to secure their web application from security threats. (10 marks)

(b) Write the output of the code below. (10 marks)

```
<?php
    $n = 1;
    do {
    echo "$n + 3 <br/>";
    $n++;
    } while ($n <= 10);
?>
```

Question Four (20 marks)

- (a) Write down a PHP, IF ELSE structure. (5 marks)
- (b) With an example ILLUSTRATE the use of IF ELSE structure above. (5 marks)
- (c) Write a program in php to find the salary of a person given that;

Net_pay = gross_pay – deduction

Gross_pay = Basic_pay + Allowance

Deduction Nssf = 200

NHIF = 1750

Tax = 30% of Basic_pay

Allowance (house_allowance, non_practicing_allowance). (10 marks)

Question Five (20 marks)

- (a) What is web administration and who is a web administrator? (2 marks)
- (b) After creating a web page, explain how one can use web browser to display the contents. (4 marks)
- (c) Data and form validation are important in website development. Discuss the importance of validation. (5 marks)
- (d) Web designers are divided into several groups in modern web design approaches based on the roles they play in a web development project. Differentiate between the two popular groups of developers: front-end and back-end. (4 marks)
- (e) Discuss five key challenges a web design project team is likely to encounter and how each challenge can be surmounted. (5 marks)

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