

CHUKA

UNIVERSITY



UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF CERTIFICATE IN COMPUTER  
SCIENCE

COSC 00104: WEB PROGRAMMING AND ADMINISTRATION

STREAMS:

TIME: 2 HOURS

DAY/DATE: TUESDAY 21/09/2021

11.30 A.M. – 1.30 P.M.

**INSTRUCTIONS:**

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

**Question One [30 marks] (COMPULSORY)**

(a) Explain what you understand by the term “Data Type”. Give four examples of data types.

[4 marks]

(b) Explain the importance of web standards in web design and development.

[3 marks]

(c) Describe the purpose of the “alt” attribute of the <img> tag?.

[2 marks]

(d) Highlight **FOUR** rules for declaring PHP variables.

[4 marks]

(e) A lady’s first name is Susan. Her second name is Aketch. Write a PHP program that recognizes the two separate names then displays the string “My name is Susan Aketch”.

[6 marks]

(f) Explain the role of Apache in web design and development.

[3 marks]

(g) Briefly illustrate the importance of the following data structures as used in PHP:

(i) Array

[4 marks]

(ii) Function

[4 marks]

**Question Two [20 marks]**

(a) Demonstrate how to create connections both to a MySQL server and to a database using PHP. Explain what is happening at each point using PHP comments [7 marks]

(b) Write an SQL statement that would produce the **CUSTOMER** table below with the following data types. [5 marks]

	Column Name	Data Type	Allow Nulls
🔑	CustomerId	int	<input type="checkbox"/>
	Status	int	<input type="checkbox"/>
	FirstName	varchar(255)	<input type="checkbox"/>
	LastName	varchar(255)	<input type="checkbox"/>
	MiddleName	varchar(255)	<input type="checkbox"/>
	Title	varchar(255)	<input type="checkbox"/>
	AccountId	int	<input checked="" type="checkbox"/>

(c) Write a PHP Do----While loop to increment each number by 3. The first number is 0. The loop should run five times and clearly show the output of each run. [8 marks]

**Question Three [20 marks]**

(a) You are designing a Registration Form for a Library Management System. Describe in detail how you would apply each of Schneidermann’s rules of interface design in the design of the form.

[10 marks]

(b) With the help of PHP code extract and a solution it would provide. Explain THREE logic operators [8 marks]

(c) Explain the needed of this script: `<form method = ”post” action = “.php”>` [2 marks]

**Question Four [20 marks]**

(a) List the steps followed when starting the webserver [6 marks]

- (b) All students have to pay Tuition Fees as well as Development Fees. Write a PHP function to determine the Total Fees paid by each student. [8 marks]
- (c) Explain any **FOUR** advantages of using PHP [6 marks]

**Question Five [20 marks]**

(a) Stima Sacco has implemented a MySQL database environment. Mwita is a new employee of the company and her job description requires full access to all databases and their contents in the MySQL server environment:

(i) Assuming Mwita chooses the username 'Mwita' and a password of '12345', write the MySQL code to create this user as well as their rights over the environment. [5 Marks]

(ii) Mwita is taking over from Matinde who is retiring. As a Database Administrator in charge, explain what you would do about Matinde and demonstrate through code the action highlighted. [5 Marks]

(b) State and explain any **THREE** most common website security vulnerabilities. [6 Marks]

(c) Illustrate **TWO** methods that can be used to test PHP parser installation. [4 marks]

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