



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR SECOND SEMSTER EXAMINATION FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 225: WEB APPLICATION DEVELOPMENT

SCO 207: WEB DEVELOPMENT TECHNOLOGY

DATE: 10/12/2021

TIME: 11.00-1.00 PM

INSTRUCTIONS:

This paper consists of FIVE questions

*Answer **question one** and other **two** questions in this paper*

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Define the following terms as commonly used in website application development
 - i. CGI (2 marks)
 - ii. Data Driven Website (2 marks)
- b) Write a PHP program code that prints out your name. (5 marks)
- c) Distinguish between client-side scripting and server-side scripting. (4 marks)
- d) Discuss TWO benefits of client server interactions (4 marks)
- e) Using suitable examples differentiate between Thin and Fat clients (4 marks)
- f) Explain the FOUR major components of a URL. (4 marks)
- g) Write a JavaScript program to sort the items of an array given: - (5 marks)
Var arr 1= [-3,5,-4,3,2,1]
Sample output: -4, -3,1,2,3,5,

QUESTION TWO (20 MARKS)

- a) Explain FOUR main features of VB script. (4 marks)
- b) i) Define the term “Event” in relation to VB script (2 marks)
 - ii) Explain “OnClick Event Type” and “on submit event type”. (4 marks)
 - iii) Write sample program in each. (4 marks)

- c) Describe Apache and compare it with other web server packages. (6 marks)

QUESTION THREE (20 MARKS)

- a) Elaborate below method and give an example of each
- i. The GET method (5 marks)
 - ii. The POST method. (5 marks)
- b) Interpret and write the output of the following code; (6 marks)
- ```
<!DOCTYPE html>
<html>
<head>
<meta charset=utf-8 />
<title>JS nested for loop example</title>
</head>
<body>
 var x,y,chr;
 for(x=1; x <=6; x++)
 {
 for (y=1; y < x; y++)
 {
 chr=chr+("*");
 }
 console.log(chr);
 chr="";
 }
</body>
</html>
```
- c) Briefly explain on servlets using example. (4 marks)

### QUESTION FOUR (20 MARKS)

- a) State FOUR uses of PHP (4 marks)
- b) Write a PHP code that will output “Have a good day!” if the current time is less than 20, and “Have a good night” otherwise. (5 marks)
- c) Explain THREE types of Servers in Web Applications. (6 marks)
- d) Write an embedded JavaScript function in HTML to display the product of two numbers (5 marks)

### QUESTION FIVE (20 MARKS)

- a) Explain how to install Apache web server in windows XP and windows 7 operating systems (4 marks)
- b) Using a suitable diagram example Client-Server architecture. (4 marks)
- c) Using a real-life scenario explain how 3 tier system is implemented in a learning Institution environment (6 marks)

- d) Write a simple Php code to generate even numbers between 1 and 100, the program should compute the sum of the numbers (6 marks)