



KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

**SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING
SECOND SEMESTER 2023/2024
[JAN - APRIL, 2024]**

SOEN 204: WEB PROGRAMMING 2

STREAM: Y2 S2

TIME: 2 HOURS

DAY: MONDAY, 9:00 - 11:00 A.M.

DATE: 08/04/2024

INSTRUCTIONS

- 1. Do not write anything on this question paper.***
- 2. Answer question ONE (Compulsory) and any other TWO questions.***

QUESTION ONE

- Describe the purpose of any **2** Node.js application components used in server programming /Applications development (5 marks)
- What are the security implementations that are present in Node.js (5 marks)
- What kind of API functions are supported by Node.js? (5 marks)
- Write a JavaScript code to demonstrate the concept of dynamic binding (5 marks)
- What are the guidelines for naming variables in PHP? (5 marks)
- Which operator in Perl decreases integer value by one? Explain (5 marks)

QUESTION TWO

- Write a simple PHP file, with a PHP script that uses a built-in PHP function "echo" to output the text "Hello World!" on a web page: (5 marks)
- Write a script that has a form with an event handler attribute (5 marks)
- Describe the different Phases of Event Handling in JavaScript (5 marks)
- Use a piece of code to demonstrate the general form of a subroutine definition in Perl programming language (5 marks)

QUESTION THREE

- a. Write a piece of code to describe the syntax of the if statement in PHP (5 marks)
- b. Describe any five responsibilities/roles of a backend web developer (10 marks)
- c. Use an example to show the basic syntax for creating a function in JavaScript (5 marks)

QUESTION FOUR

- a. Use a diagram to describe the components of the django framework (5 marks)
- b. Write a program to show how the node.js built in HTTP module can be used to create an HTTP server that listens to server ports and gives a response back to the client (10 marks)
- c. Write a program in JavaScript to show how the A Fetch API works (5 marks)

QUESTION FIVE

- a. How are Dynamic Web Pages Processed? Explain (5 marks)
- b. What are the key features of JavaScript? Explain (5 marks)
- c. What are the life-cycle methods for Java Server Pages technology (JSP) (5 marks)
- d. Use a diagram to describe the node.js process model and explain accurately what happens in each of the process model phases. (5 marks)