



**MURANG'A UNIVERSITY OF TECHNOLOGY**  
**SCHOOL OF COMPUTING AND INFORMATION**  
**TECHNOLOGY**

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**UNIVERSITY ORDINARY EXAMINATION**

**2024/2025 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR BBIT, BIT, BCS,  
AND BSE**

**SIT 300 – WEB APPLICATION DEVELOPMENT**

**DURATION: 2 HOURS**

**INSTRUCTIONS TO CANDIDATES:**

1. Answer question ONE and any other two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

## SECTION A – ANSWER ALL QUESTIONS IN THIS SECTION

### QUESTION ONE (30 MARKS)

- a) Explain a circumstance under which each of the following event handlers may be used in a javascript program
- i) Onmouse out
  - ii) Onclick
  - iii) Onmouseover (6marks)
- b) In a Javascript program, a variable X is assigned value 5. Determine the output of variable Y after each of the following statements have been executed.
- i) `Var Y = +X`
  - ii) `Var y = -X`
  - iii) `Var y = type of X` (6marks)
- c) Outline four technical challenges faced by web programmers when enforcing internet security in Web applications. (4marks)
- d) Explain the circumstance necessitating the use of each of the following escape sequence in a javascript program: (4marks)
- i) `\ t`
  - ii) `\ r`
- e) Distinguish between client side and server-side web programming in respect to their functionality. (4marks)
- f) Describe three ways in which we can connect to MySQL from PHP. (6marks)

## SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

### QUESTION TWO (20 MARKS)

- a) Write a javascript code embedded in HTML that uses the prompt ( ) function to prompt a user for a password when a button is clicked. The program should use a function to check the validity of the password and output the message, “VALID PASSWORD” If the password is “NENOSIRI” otherwise, it should output “INVALID PASSWORD”
- b) Figure 2 shows a form in HTML used to compute the triple of a number entered

Enter the number

Result:

Figure 2

Write a javascript code embedded in HTML to allow a user to enter the number. The program should then use a function to compute the triple of the number and display the results. (6marks)

- c) State three differences between switch and if—else control structures as used in javascript programming. (6marks)

### QUESTION THREE (20 MARKS)

- a) Write a javascript code embedded in HTML that would display the following pattern on the browser. Use a for....Loop statement (7marks)

*		*
* *		**
***		***
****		****
*****		*****

- b) Explain three methods that can be used to convert string variable to numbers in a Javascript program. (6marks)
- c) Distinguish between GET and POST methods in PHP. (3marks)
- d) Describe four advantages of using PHP for web development. (4 marks)

### QUESTION FOUR (20 MARKS)

- a) Write a Javascript program embedded in HTML that would use a function to compute area of a triangle whose base length is 400 and height is 100. The program should display the results on the browser as shown in the statement below. (6marks)

The area of the triangle  is

- b) Write a PHP function with a simple if-else statement which evaluates student's marks and output whether it is pass or fail. Assume that the passmark is 50 and that the function will be called with the actual mark as an argument. (6marks)
- c) Write PHP code to send a basic email using the mail ( ) function. (5marks)
- d) Explain three rules for creating variable names in PHP. (3marks)