



# **MURANG'A UNIVERSITY OF TECHNOLOGY**

## **SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY**

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY ORDINARY EXAMINATION

2023/2024 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF  
SCIENCE IN IT, BBIT, BSE, BCT, BCS, AND BACHELOR OF ARTS IN  
DEVELOPMENT STUDIES WITH IT**

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) Outline the advantages of using dynamic web pages. (4 marks)
- b) Explain two reasons for using JavaScript as a client side programming language. (4 marks)
- c) Differentiate the following terms as used in web development giving examples of any two popular implementation technologies in each case.
  - i. Web designing vs web development (4 marks)
  - ii. Server side Vs client side scripting (4 marks)
  - iii. Front – end Vs back –end designing (4 marks)
- d) Explain the use of the following MySQL functions and write the implementation syntax for each of the function. (8 marks)
  - i. EXTRACT
  - ii. GET
  - iii. SELECT
  - iv. OPEN
- e) Write the aid of two examples in each case, distinguish primitive and non-primitive data types as used in Java Script. (2 marks)

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

### **QUESTION TWO (20 MARKS)**

- a) Write a Java Script program embedded in HTML that would display all the multiples of 5 in a range 30 to 100 on a console window. Use a while loop. (6 marks)
- b) Explain three methods that can be used to convert string variables to numbers in a Java Script. (6 marks)
- c) Write a Java Script program that prompts a user to enter three numbers. The program should then compare the three numbers and display on an alert box greatest of the three. (8 marks)

### **QUESTION THREE (20 MARKS)**

- a) PHP allows two ways in which an argument can be passed into a function. State and explain the two ways. (4 marks)
- b) Write a PHP function with a simple if – else statement which evaluates students’ marks and output whether it is pass or fail. Assume that the pass mark is 50 and that the function will be called with the actual mark as an argument. (6 marks)
- c) Write a PHP program to read and display the content of a text file. (4 marks)
- d) Describe three ways in which we can connect to MySQL from PHP. (6 marks)

#### **QUESTION FOUR (20 MARKS)**

- a) Explain what entails planning in web development. (2 marks)
- b) Cookies in websites are used to identify users. Write a PHP script that creates a cookie called mycookie with the value 'user'. The cookie should expire in 10 days. (4 marks)
- c) Write JavaScript code to check the strength of a password entered in a form by displaying the message 'password not strong' when password entered has less than 6 characters. (6 marks)
- d) Write a PHP script tag that selects data from a 'student' table in the 'school' database and displays each of the results in the browser. (8 marks)