



# **MURANG'A UNIVERSITY OF TECHNOLOGY**

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

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**UNIVERSITY ORDINARY EXAMINATION  
2020/2021 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR, DIPLOMA  
IN INFORMATION TECHNOLOGY**

**UNIT CODE: SCS: 053**

**UNIT TITLE: VISUAL PROGRAMMING**

**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) Briefly explain the following visual basic IDE components (5 Marks)
- (i) Text Box
  - (ii) Tool Box
  - (iii) Project explorer
  - (iv) Combo Box
  - (v) Radio button
- (b) Differentiate between call by value and call by reference as used in visual basic functions. (4 marks)
- (c) Highlight at least **four** user events that a user can perform on a visual basic interface. (4 marks)
- (d) Discuss **three** logical operators used in visual basic. (6 marks)
- (e) Illustrate the syntax of declaring functions in visual basic. (6 marks)
- (f) Write a visual basic console application to find the area of a rectangle. (5 marks)

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

### QUESTION TWO (20 MARKS)

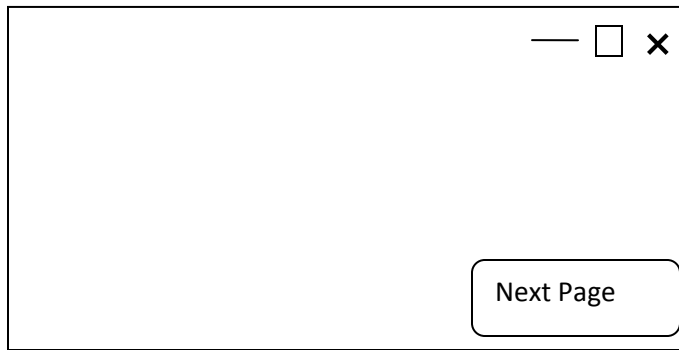
- (a) Declare the following variables
- (i) Student- name , registration-number, address as global variable. (6 marks)
  - (ii) Marks, email, As local variables. (4 marks)
- (b) Write a visual basic while loop to output values between 0-10. (6 marks)
- (c) Outline four rules that one must adhere to when creating graphical user interface in visual basic. (4 marks)

### QUESTION THREE (20 MARKS)

- (a) Using flowchart differentiate between for ...next loop and Do... while loop. (6 marks)
- (b) Declare a structure known as employee with the following values: first- name, Last-name, address (6 marks)
- (c) Discuss **four** files input/output operations that are present in visual basic. (8 marks)

### QUESTION FOUR (20 MARKS)

- a) Databases have become an integral part of nowadays applications. Enumerate any three data manipulation operations that can be conducted on the data in the database by VB applications. (6 marks)
- b) The diagram below show a GUI interface with a button label “next page” once the user clicks on this button the program is supposed to move to a form known as Form2 . Write code segment to execute the action once the bottom is clicked. (4 marks)



- (c) Write a visual basic program to declare an array with five values and print the values.(6 marks)
- (d) Using a code segment illustrate how comments are used in visual programming. Outline why comments are important in visual programming. (4 marks)