



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY
SECOND YEAR SPECIAL / SUPPLEMENTARY EXAMINATIONS FOR
BACHELOR OF SCIENCE (COMPUTER SCIENCE)
SCO 202: EVENT DRIVEN PROGRAMMING

DATE: 31/8/2022

TIME: 8.30-10.30 AM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS, COMPULSORY)

- a) Name any THREE Controls found in the VB 2010 IDE (3 marks)
- b) Name any FIVE elements found in Visual Basic 2010 IDE (5 marks)
- c) Define the following terms
- i) Properties (2 marks)
 - ii) Events (2 marks)
 - iii) Methods (2 marks)
- d) Give TWO examples for each of the following:
- i) Properties (2 marks)
 - ii) Events (2 marks)
 - iii) Methods (2 marks)
- e) Consider the following code written in VB 2010 and answer the questions that follow

Dim counter , sum As Integer

For counter=5 to 100 step 5

sum+=counter

ListBox1.Items.Add (sum)

Next

- i) Write the output of the program (3 marks)
- ii) Re-write the code using a **Do...while** statement (3 marks)
- iii) Draw a flow-chart to represent this program (4 marks)

QUESTION TWO (20 MARKS)

- a) Convert the following mathematical equations to VB programming expressions
 - i) $m^n + \log 2$ (4 marks)
 - ii) $(\sqrt{x^2 - 4ac}) / 2a$ (4 marks)
- b) Explain ALL the steps involved in creating a VB 2010 Application (6 marks)
- c) The weekly pay for a worker is based on the hourly-rate times the number of hours worked. Overtime is computed by multiplying the extra hours worked with a rate of 2.5. Write down a method to compute the wage of a worker working overtime (6 marks)

QUESTION THREE (20 MARKS)

- a) Name any FOUR VB 2010 Data Types (4 marks)
- b) In a practical lesson for SST 202 course unit, students were asked to create an application in VB 2010 for a BMI Calculator. The following range of BMI values for the weight status was provided; Underweight = <16.5 Normal weight = 16.5-25.9 Overweight = 25-29.9 Obesity = BMI of 30 or greater.
Answer the following questions in view of this problem statement:
 - i) Name the types of controls you will use for the problem (5 marks)
 - ii) which variables would you need to declare (2 marks)
 - iii) Draw the User Interface of the application (3 marks)
 - iv) Write the code you will require in the **click** event of the cmdAddbutton (6 marks)

QUESTION FOUR (20 MARKS)

- a) Name any THREE Visual Basic 2010 math functions and how they can be used in a program (5 marks)
- b) Students were asked to solve a quadratic equation in VB 2010. Answer the following questions
 - i) Outline an appropriate procedure to follow (4 marks)
 - ii) Write down the algorithm that can be applied (6 marks)

iii) Sketch the User Interface for such an application (5 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the two types of interface found in VB (4 marks)
- b) Write the code that can be used to create an application which will print the sum of all numbers between two input values (6 marks)
- c) Illustrate the solution for the above problem graphically (4 marks)
- d) What are the advantages and disadvantages of VB 2000 (4 marks)