



MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (MATHEMATICS)

SMA 492: COMMERCIAL PROGRAMMING

DATE: 8/5/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS

Answer **question ONE** and **any other TWO** questions.

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Mention the benefits of using the VB.NET programming language (4 marks)
- b) Describe the difference between a class and an object (4 marks)
- c) Explain:
 - i. Listbox (2 marks)
 - ii. ComboBox (2 marks)
 - iii. PictureBox controls. (2 marks)
- d) Differentiate between shared methods and shared variables. (4 marks)
- e) Mention the ways in which a function can return value in VB.NET (4 marks)
- f) Write down a query to display student IDs with maximum marks in two subjects (6 marks)
- g) Explain a nested class (2 marks)

QUESTION TWO (20 MARKS)

- a) Describe and give an example in each case on the common types of operators used in VB.Net (8 marks)
- b) Explain the difference between Exit() and End() and how do they are used. (4 marks)
- c) As a programmer in VB.NET is it possible to create a function that can accept a varying number of arguments in VB.NET. (2 marks)
- d) Describe TRACE class in VB.Net. (6 marks)

QUESTION THREE (20 MARKS)

- a) Briefly explain Delegate as used in VB.NET. (2 marks)
- b) Describe An array. (2 marks)
- c) Explain the difference between DataSet and DataTable. (4 marks)
- d) Mention the features of Visual Studio .NET (6 marks)
- e. The following example makes use of various types of variables in Visual Studio .NET. Give the output of the program when compiled and executed (6 marks)

Module variablesNdatatypes

```
Sub Main()  
    Dim a As Short  
    Dim b As Short  
    Dim b As Short  
    a = 10  
    b = 10  
    c = a + b  
    Console.WriteLine("a = {0}, b = {1}, c = {2}", a, b, c)  
    Console.ReadLine()  
End Sub
```

End Module

QUESTION FOUR (20 MARKS)

- a) Describe what IDE stand for. (2 marks)
- b) Mention the basic parts that make up a A VB.Net program (6 marks)
- c) Give the output of the below code when it is compiled and executed. (4 marks)

Imports System

Module Module1

```
'This program will display Hello World  
Sub Main()  
    Console.WriteLine("Hello World")  
    Console.ReadKey()  
End Sub
```

End Module

- d) VB.Net provides various types of loops to handle looping requirements. Give examples of some of the loops. (8 marks)

QUESTION FIVE (20 MARKS)

- a) Briefly explain the various types of Data Types in VB.Net (8 marks)
- b) Draw a Flowchart program that obtains a number from the user. Determine the number type (even or odd) and print the result. (8 marks)
- c) Write down the source code to display the picture in a button click event. (4 marks)