**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2014/2015**

**YEAR 2 SEMESTER II EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**BIT 2118: APPLICATION PROGRAMMING I**

**DATE: APRIL 2015 TIME: 2 HOURS**

**INSTRUCTIONS:**

**Answer QUESTION ONE and ANY OTHER TWO Questions**

**QUESTION ONE (30 marks)**

1. What is;
2. The Microsoft NET framework? (2marks)
3. Visual Studio. NET IDE? (2marks)
4. Write and explain;
5. A statement that declares a variable to hold dates. (2marks)
6. A declaration of a two dimensional array having three rows and two columns (2marks)
7. Describe the VB syntax of the If…Then…Else statement (4marks)
8. Explain the For…Next loop (4marks)
9. Write and explain a subroutine that displays the current date in a message box (4marks)
10. Distinguish between form and windows in VISUAL BASIC (2marks)
11. Describe the syntax for adding items to the list in a list box control (3marks)
12. What is an error handler? (2marks)
13. Explain the following VB database concepts; (3marks)
14. ADD.NET
15. Data set
16. Data binding

**QUESTION TWO (20 marks)**

1. Consider the following user interface of a loan calculator project

|  |
| --- |
| Loan Calculator |
| Loan amount  Duration (months)  Interest Rate  Early Payment  Monthly Payment  Show Payment Exit |

Write and explain the code that should be attached to the show payment button to calculate and display the monthly payment. (15marks)

1. List the process you must go through to develop an application regardless of the language you use (3marks)
2. What is an exception? (2marks)

**QUESTION THREE (20 marks)**

1. Let’s say your application has two forms, named, Form 1 and Form2, and that Form1 is the project’s startup form. How do you show Form2 when an action takes place on Form1? (8marks)
2. Explain the DataAdapter object (4marks)
3. Dim names (1) As String

names (0)=”Joe Doe”

names(1)=”Peter Smack”

Explain the above VB.NET statements (4marks)

1. Identify and describe the two variations of the Do….loop statement (4marks)

**QUESTION FOUR (20 marks)**

1. The errors caused by a computer program (regardless of the language in which the program is written) can be categorized into three major groups. Discuss (6marks)
2. How do you allow a TextBox control to hold multiple lines of text in VB? (4marks)
3. Explain two ways of placing control on a form in VB.NET (4marks)
4. Write and explain a declaration of an integer array that has 6 elements (4marks)
5. What is SQL? (2marks)

**QUESTION FIVE (20 marks)**

1. Write and explain the code of an application that allows a user to enter the name of their favorite programming language and then evaluates a choice upon clicking of a button. This application should display one of two messages as follows:

If the user enters “VB”, then the outcome is that “We have a winner”. Otherwise the application will display that the language entered by the user is not a bad language. (12marks)

1. Illustrate, using an example, how you declare a constant in VB.NET (4marks)
2. Write and explain a VB.NET statement that will declare two integer two integer variables. (4marks)