UNIVERSITY EXAMINATIONS: 2013/2014

ORDINARY EXAMINATION FOR THE DIPLOMA IN

INFORMATION TECHNOLOGY

DIT 504 APPLICATION PROGRAMMING

DATE: AUGUST, 2014   **TIME: 1½HOURS**

INSTRUCTIONS: Answer Any Three Questions

QUESTION ONE

a) Define the following terms as used in programming and support your answer with examples.

  i.   Method

  ii.   Variable

  iii. Comments

  iv.   Event driven programming

[8 Marks]

b) Write one line of code to perform the following tasks in VB

  (i)   Display the text "Programming is great" on a label lbTrial

  (ii)   To clear text form a text box txttrial

  (iii) Add items "apple","Mangoe","Orange", to a combobox cbotrial

  (iv)   Put the insertion cursor on the first textbox; txttrial

[4 Marks]

c) State the syntax of the functions msgbox[] and inputbox[]   [2 Marks]

d) Differentiate between the following looping constructs [give general syntax of each]; 'while … loop' and 'do… while loop'.   [4 Marks]

e) One of the qualities of a good program is readability. As a result, there are a number of techniques employed by programmers to ensure that programs are readable. Discuss any **TWO** of them.   [2 Marks]

QUESTION TWO

a) Differentiate between a sub procedure and a function   [4 Marks]

b) Write a windows application to accept inputs for the dimensions of a rectangle through the input box function and then compute the area and perimeter of the rectangle. The Area and Perimeter should be displayed through a Message Box

[8 Marks]

c) Explain the term debugging   [2 Marks]

d) Describe the Visual studio IDE environment and list **FIVE** components on this window.   [6 Marks]

QUESTION THREE

a) Write a program to calculate the sum of the first **SIX** positive integers using the Do while loop   [6 Marks]

b) Rewrite the above code using the For..Next loop .   [3 Marks]

c) Explain the meaning of the following Visual Basic code.   [2 Marks]

        Dim Test[5] as Integer

        ReDim Test[15] as Integer

d) Explain **THREE** types of errors encountered during program development

[6 Marks]

e) Write pseudo code for a program to calculate the sum of ten numbers provided by a user   [3 Marks]

QUESTION FOUR

a) Distinguish between a selection control and a loop control structure   [4 Marks]

b) Outline **FOUR** characteristics of a good algorithm   [4 Marks]

c) Briefly explain any **THREE** advantages of using functions in a program[6 Marks]

d) Using examples, Explain any **THREE** fundamental data types supported by the VB language.   [6 Marks]

QUESTION FIVE

a) List any **TWO** rules used when naming variables [Identifiers]   [2 Marks]

b) A program is required to process and award students grades for students in a class according to the following summary table.

Marks%	Grade
80 – 100	A
60 – 79	B
40 – 59	C
Below 40	Fail

Write a VB program that prompts the user for the student's Marks and outputs the appropriate grade.   [6 Marks]

c) describe **THREE** data operators supported by VB   [6 Marks]

d) Describe the **THREE** control structures used in programming   [6 Marks]