KIBABII UNIVERSITY COLLEGE
(A Constituent College of MasindeMuliro University of Science Technology)
P.O. Box 1699-50200 Bungoma, Kenya
Tel. 020-2028660/0708-085934/0734-831729
E-mail: enquiries@kibabiiuniversity.ac.ke

UNIVERSITY REGULARY EXAMINATIONS

2012 /2013 ACADEMIC YEAR

FOR THE CERTIFICATE

OF INFORMATION TECHNOLOGY

(MAIN EXAMINATION)

COURSE CODE: ITC 017

COURSE TITLE: Visual Basic Programming

DATE: 22nd August, 2013 **TIME:** 200pm – 5.00pm

INSTRUCTIONS TO CANDIDATES

Answer **Questions ONE a**nd **ANY OTHER TWO**.

Q1)

a.)

i) Define the following terms as used in programming

1. Semantics
2. Syntax
3. Logic (6Marks)

ii) Describe any five importance of programming (5 Marks)

iii) Differentiate between the following as used in Programming

1. Procedure and Function
2. A variable and an Array (4 Marks)

b.) Consider the following marks achieved in a Form One class at Kibabii Mixed School in a maths class : -

Name	**Mark**	**Name**	**Mark**
John	53	Augustine	71
Hillary	88	Mark	62
Rose	44	Sabina	34

If the grading system was as follows:-

0 – 19	E	45 – 49	C –	65 – 69	B
20 – 29	D –	50 – 54	C	70 – 79	B +
30 – 39	D	55 – 59	C +	80 – 84	A –
40 – 44	D +	60 – 64	B –	85 – 99	A

Write a program that would allocate grades to the students mark, capturing situations that fall below the 0 and above 99 mark respectively as “Not Applicable”. Use the select case decision making construct (5 Marks)

c.) Consider the following program:-

```
Private Sub Command1_Click()

    Dim x As integer

    x=10

    Do
```

```
        x=x+1

        debug.print x

    loop Until x>1

End Sub
```

i) State the output of the above program (2 Marks)

ii) Identify and state the type of error committed in the above program. Correct it so that it can print values from 10 to 1 in that order. (3 Marks)

d.) Write a program that implements a two dimensional array, to hold the values in the table below:-

45	87	45	28
34	56	84	71
65	43	23	96

Use the For … Next iterative control construct. (5 Marks)

Q2 (a)

i) Giving appropriate examples, define a Procedure as used in programming (3 Marks)

ii) Differentiate between a Private and a Public Procedure (2 Marks)

iii) Write a procedure that would change the background of a textbox to blue color (2 Marks)

iv) Define a function as used in programming (2 Marks)

v) Differentiate between a Public and a Global Function (2 Marks)

vi) Write a simple function that would divide any two values requested from the user.(4 Marks)

Q2)

i) Differentiate between Integer and Double data types as used in visual Basic (2 Marks)

ii) Briefly describe the three types of control structures used in visual basic programming.

(9 Marks)

iii) Draw a flow chart diagram that shall implement the if … elseif … else control construct

(4 marks)

Q3)

a.) Differentiate between the *Do while ... loop* and the *Do ... loop until* control constructs (4 marks)

b.) Draw a flow chart diagram that would implement the *do ... loop until* control construct. (2 Marks)

c.) Using the *for ... next* loop control construct, write a program that would print even numbers between 0 – 20 in descending order. (4 Marks)

d.) State and explain the output of the following program. (5 Marks)

```
Private Sub Command1_Click()
        Dim x As Integer
        x=0
        while x<=10
                If x=8 then
                        goto Ruka:
                end if
                x=x+2
                debug.print x
        wend
Ruka:
        While x<=20
                x=x+1
                debug.print x
        wend
End Sub
```

define the term array as used inprogramming (2 Marks)
giving examples, describe any two types of arrays (4 Marks)

Re-Write the following program using the for … next iterative construct (5 Marks)

```
Private Sub Command1_Click()
        Dim Array_Values  as Integer
        Dim y As Integer
        Dim z As Integer
        y=0
        z=0
        while y<=2
        while z<=4
        select case y
        case is =0
        x(y,z)=z+1
        case else
```

```
if z=0 then
x(y,z)=y+1
else
x(y,z)=x(y,(z-1))+(y+1)
end if
end select
z=z+1
wend
y=y+1
wend
```

End Sub

c) Write a program that implements the following two dimensional array, performing the required operations to achieve values as shown below (5 Marks)

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15