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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2017/2018 ACADEMIC YEAR
DIPLOMA IN BUSINESS INFORMATION TECHNOLOGY**

DBT 025 - PROGRAMMING CONCEPTS

Date:
Time:

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Explain the following terms as used in VB.Net programming:
- i. Controls
 - ii. Events
 - iii. Arrays
- (3 Marks)
- b) Explain three rules to follow when naming variables.
- (3 Marks)
- c) Explain the difference between design time and run time.
- (4 Marks)
- d) Write a program that accepts three integers using *input boxes* and displays the largest of the integers using a message box.
- (4 Marks)
- e) Identify the error in the following code that is supposed to display a message box.
Messagebox ("Welcome to KWUST", Notification).
- (2 Marks)
- f) Discuss any two factors that one needs to consider when designing User Interface.
- (4 Marks)

g) Data types are used when declaring variables in different programming language. Giving examples, explain three types of data types in used in VB.NET. (6 Marks)

h) Discuss any two types of errors that are likely to occur in a VB.Net program. (4 Marks)

QUESTION TWO (20 MARKS)

a) Explain the difference between checkboxes and radio buttons. (2 Marks)

b) List and explain any two data types used in VB.Net programming. (4 Marks)

c) Explain the use of the following lines of codes:

- i. Me.hide ()
- ii. Me.close ()

(4 Marks)

d) Using an IF statement, write a program that can be used to determine and indicate the class of a student from the ages given and display the output in using a message box. The age limits and classes are as shown below. (6 Marks)

e) Using the select case statement, write a program that prompts the user using an input box to enter his age then tests if a person is: (4 Marks)

QUESTION THREE (20 MARKS)

a) Write a program that displays the following table on a label (Note that 1 mile is 1.609 kilometers)

Miles	Kilometers
1	1.609
2	3.218
..	
9	14.481
10	16.09

(6 Marks)

b) Show two ways you can use to clear text in a text box named txtName. (2 Marks)

c) Explain the function of a properties window in a VB.Net coding environment. (2 Marks)

d) Write a program that calculates a product of numbers that are entered to the program using an input box and displays the result using a message box. (6 Marks)

e) Explain the meaning of the following as used in database connectivity

- i. Connection
- ii. Dataset
- iii. Data Reader
- iv. Data Source

(4 Marks)

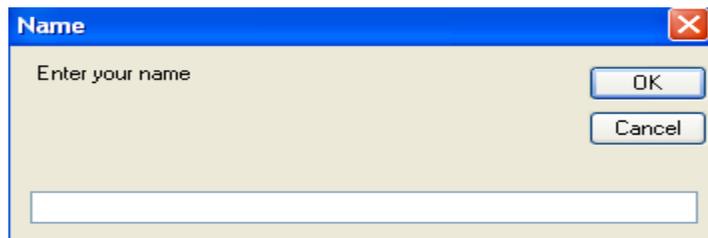
QUESTION FOUR (20 MARKS)

a) Explain two types of errors encountered during programming. (4 Marks)

b) Write a program that outputs numbers between 1 and 10 in a *list box* named `lstMyNumbers` using for loop. (3 Marks)

c) Write a method that converts an uppercase letter to a lowercase letter. Use the following method header:
i. `public function upperCaseToLowerCase(Byval ch as string) as string`
ii. For example, `upperCaseToLowerCase("B")` returns `b` (3 Marks)

d) Write a code that will give out the following output.



Then when you enter the name Peter, it gives the following output.



(6 Marks)

e) Explain what the following lines of codes do.

- i. `txtMyName.clear()`
- ii. `chkEngineering.enabled=true`

(4 Marks)

QUESTION FIVE (20 MARKS)

a) Declaring variables is usually different in different programming languages. Giving examples, explain three ways of naming variables in VB.NET.

(6 Marks)

b) Differentiate the following controls

- i. Input box and message box?
- ii. Radio button and a check box?

(4 Marks)

c) c) Environments in VB.Net can be classified as run time or design time controls. Giving examples, explain these types of environments.

(4 Marks)

d) Define the term EVENT as used in VB.Net?

(2 Marks)

e) List four other types of programming languages.

(4 Marks)