



UNIVERSITY OF MORATUWA
Faculty of Information Technology

Bachelor of Information Technology (BIT)
Level 1 – Semester 2 Examination
ITE 1103 – Visual Application Programming

Time Allowed: 3 hours

November 2009

ADDITIONAL MATERIAL

None

INSTRUCTIONS TO CANDIDATES

1. This paper contains 50 (Fifty) Multiple Choice Questions.
2. Each question has 5 choices with one or more correct answers.
3. Answer all questions.
4. All questions will carry equal marks.
5. There will be a penalty for incorrect responses to discourage guessing.
6. The mark given for a question will vary from –1 (All the incorrect choices are marked & no correct choices are marked) to +1 (All the correct choices are marked & no incorrect choices are marked).
7. Answers should be marked on the special answer sheet provided.
8. Calculators are not allowed.
9. Note that questions appear on both sides of the paper.
If a page is not printed, please inform the supervisor immediately.

Do not turn this page until you are instructed to do so

Continued...

1. Objects like the “Button” control that appear in the graphical user interface are referred to as:

- (a) Visible objects
- (b) Attributes
- (c) Properties
- (d) Methods
- (e) Events

2. What statement(s) is/are true when considering events in visual programming?

- (a) They are not considered as programming code written in a programming language.
- (b) Sometimes an event may get triggered as a result of activities carried by a ‘method’ associated with the object.
- (c) They act as notifications of activities happening in the object’s environment.
- (d) ‘Append’ is a database event would result the addition of a new data record to the underlying database.
- (e) ‘OnClick’ is an event associated with the button object.

3. What is the correct sequence of the three-state cycle which most of the traditional software operates?

- (a) Data entry, data processing and output.
- (b) Data preprocessing, Data entry and output
- (c) Add delete and modify
- (d) Add, modify and delete
- (e) None of the above

4. An event driven program consists of a collection of isolated ‘sub-routines’ where each of them is intended to provide a _____

- (a) Response to a request.
- (b) Response to an event.
- (c) Event handler
- (d) Object handler
- (e) Database handler

5. A re-usable component is:

- (a) A self contained software module.
- (b) Designed to use commonly across several of applications.
- (c) Implemented and available as object libraries.
- (d) Not composed with parameters
- (e) Fully compatible with business logic layer.

6. Which are not considered as advantages of using Graphical User Interface?

- (a) A self contained software module.
- (b) Designed to use commonly across several of applications.
- (c) Implemented and available as object libraries.
- (d) Not composed with parameters
- (e) Fully compatible with business logic layer.

7. What are the most Common Graphical User Interface Components?

- (a) Windows
- (b) Icons
- (c) Buttons
- (d) Menus
- (e) ALL the above

8. Which of the following statements are false considering the GUI components?

- (a) Popup menu appears in many applications when you left click on the interface.
- (b) Radio buttons are used only to give a user one of two choices
- (c) Check boxes are used to give a user a yes (ticked) or no (un-ticked) choice.
- (d) List boxes provide single or multiple selectable items.
- (e) Drop-Down box provide single or multiple selectable items.

9. Which of the following statements are false considering the functionality of windows components?

- (a) A popup menu appears in many applications when you left click on something.
- (b) Radio buttons are used to give a user the option to select one from two choices.
- (c) Check boxes are used to give a user a yes (ticked) / no (un-ticked) choice.
- (d) Radio button group will give the option to select more then one from many choices to the user
- (e) List boxes provide selectable items.

10. Which of the following statements are false about Visual Basic?

- (a) Simple but yet powerful and feature rich programming language,
- (b) So popular and has many good resources available but all of them are commercial.
- (c) Can find many tools on the internet that will spare you some programming time.
- (d) Microsoft has provided a freely downloadable version of Visual Basic, referred to as the Visual Basic Express Edition
- (e) Visual Basic is not bundled into Microsoft Visual Studio.

11. The following is the equation of a straight line:

$$y = mx + b$$

What are the correct representations in visual basic?

- (a) $y = m * (x + b)$
- (b) $y = m * x + b$
- (c) $y = (m * x) + b$
- (d) $y = m \% x + b$
- (e) $y = m / x + b$

12. Consider the following second-degree polynomial:

$$y = ax^2 + bx + c$$

What are the correct representations in visual basic?

- (a) $y = (a * x) ^ 2 + (b * x) + c$
- (b) $y = a * x ^ 2 + b * x + c$
- (c) $y = (a * x ^ 2) + b * (x + c)$
- (d) $y = a * (x ^ 2 + b * x) + c$
- (e) $y = a * x ^ 2 + (b * x) + c$

13. Consider the following declaration:

Dim x as Integer

Which of the following statements will set the value of x to 5?

- (a) $x = x + 5$
- (b) $x = x + 4$
- (c) $x += 5$
- (d) $x -= 6$
- (e) If $(x < 5)$ Then
 $x -= 6$
 Else
 $x = x + 4$
 End If

14. Which of the following statements are true considering the Visual Studio development environment?

- (a) Under 'Project Type' a user may get different programming language options.
- (b) Basic framework for the new application can be obtained by choosing a suitable template.
- (c) Once the project configuration is done the user does not have the facility to change it later.
- (d) It is not a good practice to ensure that all project files are stored in a single directory under the solution name.
- (e) To run the visual basic application, the user just have to press F1

Consider the following segment of code for questions **15-17**:

```
Module myModule
Public car as string = "TATA "
Public function getCar(Car as string) as String
Dim myCar as string = "Benz"
Return myCar
End Function
```

15. The myCar variable declared in myModule

- (a) Can be accessed from any Form in the project where myModule is declared.
- (b) Cannot be accessed from all the Forms in the project where myModule is declared.
- (c) Can be accessed from any Form in the project where myModule is declared only by using myModule.myCity
- (d) Cannot be accessed from any class in the project where myModule is declared.
- (e) Can only be accessed from a private function in a Form where myModule is declared.

16. Which of the following would be returned by the function call getCar(myCar)?

- (a) Null
- (b) Nothing
- (c) "TATA "
- (d) "Benz"
- (e) None of the above

17. If the value of car is "Toyota", what would be the output of getCar("Nissan")?

- (a) Null
- (b) "Toyota"
- (c) "TATA"
- (d) "Benz"
- (e) None of the above

18. Consider the following code:

```
x = 5
z = "Big"
x ^= 2
z &="Daddy"
```

Which are the final values of x and z ?

- (a) x= 10 , z ="Daddy"
- (b) x= 10 , z ="BigDaddy"
- (c) x= 25 , z ="Daddy"
- (d) x= 25 , z ="Big Daddy"
- (e) None of the Above

19. The following code should print the squares of **1** to **100** in a **MessageBox**.

```
Dim number As Integer = 1
Do While number < 100
    MessageBox.Show(number ^ 2)
While End
```

Which of the following statements are true regarding the above code?

- (a) Code works according to the need.
- (b) While loop never exits
- (c) The "number" does not increase
- (d) Integer should be initialized to 5
- (e) None of the above

20. Which of the following statements are true?

- (a) Pseudocode is a structured programming language.
- (b) The body of a Do While/Loop is executed only if the loop continuation test is false.
- (c) The body of a While loop is executed only if the loop continuation test is false.
- (d) The body of a Do Until/Loop is executed only if the loop continuation test is true.
- (e) None of the above

21. Which of the following statements will return False?

- (a) IsDBNull(False)
- (b) IsDBNull(DBNull.value)
- (c) IsNumeric ("number")
- (d) IsNumeric("25.45")
- (e) IsDate("15-15-2009 15:18:10")

22. How does a subroutine terminate code execution in Visual Basic

- (a) Exit
- (b) Close Sub
- (c) Exit Sub
- (d) Kill
- (e) None of the above

23. The _____ allows programmers to add controls to the form in a visual manner.

- (a) Solution Explorer
- (b) Auto-hide
- (c) Toolbox
- (d) Dynamic Help
- (e) Solution

24. The expression to the _____ of the assignment operator (=) is always evaluated first before the assignment occurs

- (a) Below
- (b) Right
- (c) Top
- (d) Left
- (e) Above

25. Types such as Integer and String are often called _____ data types.

- (a) Primitive
- (b) Result
- (c) Module
- (d) Export
- (e) Import

26. What is meant by syntax error in Visual Basic?

- (a) Statement on code window which violates the syntax rules of Visual Basic
- (b) Error that occur when programming is actually executing
- (c) Errors which allow your project to run, but will produce incorrect results
- (d) Faults in use of controls in the form designing
- (e) Occurs when a key is pressed

27. Which statement declares a string variable in Visual Basic?

- (a) Dim a String
- (b) Const a String
- (c) Dim a As String
- (d) String a
- (e) Int a

28. Which statement(s) expresse(s) a commenting style of Visual Basic??

- 1. /this is a comment
- 2. "this is a comment"
- 3. 'this is a comment
- 4. // this is a comment
- 5. #this is a comment

29. According to the following statement, how many array elements are available?

Dim a(3,3) as integer

- 1. 2
- 2. 4
- 3. 8
- 4. 9
- 5. 16

Consider the following segment of code for question **30**:

Assume that **intvalue** has been initialized to **50**. The values from **0** to **50** should be summed.

```
While intvalue >= 0  
sum += intvalue  
End While
```

30. Which of the following statement(s) is/are correct?

- (a) Should input as Integers
- (b) Error: The sentinel value (-1) is added to total producing an incorrect sum.
- (c) Error: Repetition condition may never become false, resulting in an infinite loop.
- (d) This code works well
- (e) None of the above

Consider the following segment of code for question **31**:

```
count = 1  
sum = 0  
  
While count <= 199  
sum += count  
count += 2  
End While
```

31. Which of the following statement(s) is/are correct?

- (a) Sum the values between 1 and 199 using a While structure
- (b) Sum the even Integers between 1 and 199 using a While structure
- (c) Sum the odd Integers between 1 and 199 using a While structure
- (d) Sum the odd Integers between 0 and 199 using a While structure
- (e) None of the above

Consider the following segment of code for question **32**:

```
Sub Main()  
  
    Dim counter As Integer = 3  
  
    While counter <= 20  
        Console.WriteLine(counter & " ")  
        counter += 4  
    End While  
  
End Sub
```

32. What is/are the output(s) of this program?

- (a) 3 5 11 13 19
- (b) 7 11 15 19
- (c) 3 7 9 11 13 15 17 19
- (d) 3 7 11 15 19
- (e) None of the above

Consider the following segment of code for question **33**:

```
Sub Main()  
  
    Dim counter As Integer  
  
    For counter = 1 To 25 Step 5  
        Console.WriteLine(counter & " ")  
    Next  
  
End Sub
```

33. What is/are the output(s) of this program?

- (a) 1 5 10 15 20 25
- (b) 1 5 11 15 21
- (c) 1 6 10 16 20
- (d) 6 11 16 21
- (e) None of the above

34. When considering the MessageBoxButtons constants which is/are true ?

- (a) MessageBoxButtons.OKCancel will allow the user to either continue or cancel an operation
- (b) MessageBoxButtons.OKCancel will display only the ok button in a message box
- (c) MessageBoxButtons.YesNoCancel will display radio buttons to select yes or no and a cancel button in a message box
- (d) MessageBoxButtons.RetryCancel will display Retry and Cancel buttons in a message box.
- (e) None of the above

35. In a For/Next repetition structure, Keyword _____ is optional when the control variable's increment is one.

- (a) To
- (b) Count
- (c) Step
- (d) Sum
- (e) Exit

36. Type _____ is used for monetary calculations

- (a) Double
- (b) Integer
- (c) Decimal
- (d) String
- (e) Dim

37. Case Else is _____ in the Select Case selection structure

- (a) Required.
- (b) Compulsory
- (c) Optional
- (d) Not required
- (e) Header

38. The expression $x \leq z$ And $y < 4$ is true,

- (a) if x is less than or equal to z or y is greater than 4.
- (b) if x is less than or equal to y and y is greater than 4.
- (c) if x is less than z and y is less than 4.
- (d) if x is less than or equal to z and y is greater than 4.
- (e) None of the above statements are true

Consider the following segment of code for question **39**:

```
For i = -20 To 20
```

```
    If i Mod 5 = 0 Then  
        Console.Write(Abs(x))  
    End If
```

```
Next
```

39. What is the output of the above code?

- | |
|--|
| <p>(a) -20 -15 -10 -5 0 1 5 10 15 20
(b) -20 -15 -10 -5 0 5 10 15 20
(c) 20 15 10 5 0 5 10 15 20
(d) 20 15 10 5 5 10 15 20
(e) None of the above</p> |
|--|

Consider the following segment of code for question **40**:

```
Public Class Magical_Class
```

```
    Dim i As Integer
```

```
        Function Magical(ByVal num As Long) As Long
```

```
            If num <= 1 Then
```

```
                Return 1
```

```
            Else
```

```
                Return num * Magical (num - 1)
```

```
            End If
```

```
        End Function
```

```
        i=5
```

```
        Magic_value= Magical(i)
```

```
        Console.Write(Magic_value)
```

```
    End Class
```

40. What is the output when the class called Magical_Class is executed?

- (a) 5
- (b) 100
- (c) 120
- (d) 1
- (e) None of the above

41. What is/are the correct answer(s) when considering a local variable within a procedure?

- (a) The variable is by any other procedure
- (b) The variable is known only within the procedure
- (c) It is called as a Function procedure
- (d) It can be of any type
- (e) None of the above

42. In Visual Basic, it is possible to have various procedures with the same name that operate on different types or numbers of arguments. This is called procedure _____.

- (a) Repetition
- (b) Procedure call
- (c) Modules
- (d) Selection
- (e) Overloading

43. A procedure that calls itself either directly or indirectly is a _____ procedure.

- (a) Recursive
- (b) Procedure call
- (c) Automatic
- (d) Selection
- (e) Overloading

44. What is/are the command(s) not included in the control menu of a vb.net form?

- (a) Restore
- (b) Minimize
- (c) Resize
- (d) Maximize
- (e) Open

45. Which statement(s) is/are true?

- (a) Both statements print the name of the current month.
- (b) Both statements print the number of the current month.
- (c) First statement will print the number of the current month and the second statement will print the name of the current month.
- (d) First statement will print the name of the current month and the second statement will print the number of the current month.
- (e) None of the above

Consider the following segment of code for question **46-48**:

```
Dim st1, st2, st3 , st4 , banner, advert As String
```

```
st1 = "VB Programming"
```

```
st2 = st1.Copy(st1)
```

```
st3 = s1.Length.ToString
```

```
st4 = String.Compare(st1, st2)
```

```
banner = "VB is a good programming language but VB.NET is the new trend"
```

```
advert = banner.Replace("VB", "VB.NET")
```

46. What are the values of the strings st1, st2 and and st3?

- (a) st1 = "VB Programming" , st2 = "VB Programming" , st3 = "VB Programming"
- (b) st1 = "VB Programming" , st2 is invalid, = "VB Programming"
- (c) st1 = "VB Programming" , st2 = "VB Programming" , st3 = 20
- (d) st1 = "VB Programming" , st2 = "VB Programming" , st3 = 14
- (e) st1 = "VB Programming" , both st2 and st3 are invalid

47. What is the value of the string st4?

- (a) -1
- (b) Invalid statement
- (c) 1
- (d) 0
- (e) -2

48. What is the value of the string st4?

- (a) "VB is a good programming language but VB.NET is the new trend"
- (b) "is a good programming language but is the new trend"
- (c) "VB.NET is a good programming language but VB.NET is the new trend"
- (d) "VB.NET is a good programming language but VB.NET.NET is the new trend"
- (e) None of the above

Consider the following segment of code for question 49-50:

```
Dim ds As New DataSet
Dim da As OleDb.OleDbDataAdapter
Dim sql As String
sql = "SELECT * FROM Customers"
da = New OleDb.OleDbDataAdapter(sql, con)
```

49. Which statement is valid to fill the DataSet as "current customers" with records from the Customers Table

- (a) da.Fill(ds, " current customers ")
- (b) ds.Fill(da, " current customers ")
- (c) Fill(da, " current customers ")
- (d) Fill.current customers
- (e) ds.da.Fill.current customers

50. Suppose if the query (sql) needs to be changed as to get the number of customers where their income is greater than 10,000 : Which statement is valid to retrieve the data?

- (a) SELECT * FROM Customers WHERE income >10000
- (b) SELECT COUNT(CustomerID) FROM Customers WHERE income <10000
- (c) SELECT COUNT(CustomerID) FROM Customers WHERE income >10000
- (d) SELECT COUNT(CustomerID) * FROM Customers WHERE income >10000
- (e) None of the above statements are valid.

END OF PAPER