



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2017/2018**

COURSE NAME : PRINCIPLES OF DOT NET  
PROGRAMMING

COURSE CODE : DAT 20903

PROGRAMME : DAT

EXAMINATION DATE : JUNE / JULY 2018

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWER ALL QUESTIONS IN  
THE ANSWER BOOKLET

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THIS QUESTION PAPER CONSISTS OF TWENTY ONE (21) PAGES

**PART A**

**Q1** Recognize the programming style used in the code segment below:

```
lblWish.Text = "Hello " & txtName.Text & ": " & _  
    "You have been selected to win a prize. " & _  
    "Please contact us for getting the prize."
```

- A. Use double quotation to write comments
- B. Use single quotation to handle statement as a comment
- C. Use a special character to split the VB statements
- D. Use a line-continuation character for a long VB statement

(1 mark)

**Q2** Identify a statement of comment.

- A. 'Assign value to a variable
- B. 'Assign value to a variable'
- C. "You have been selected to win a free prize. "
- D. lblGreeting.Text = "Welcome to Visual Basic Class"

(1 mark)

**Q3** Choose an identifier which follow the Visual Basic naming rules.

- A. integer#Profit
- B. Function
- C. int Profit Per Month
- D. conMinimum

(1 mark)

**Q4** Choose the best keywords to complete the declaration below for a constant.

\_\_\_\_\_ strCompName As \_\_\_\_\_ = "Edu Pagoh Sdn Bhd"

- A. Private, String
- B. Dim, String
- C. Const, Char
- D. Const, String

(1 mark)

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**Q9** “It is used when assigning values to the properties of user-created objects, and when retrieving the values of those properties”.

The above statement refers to \_\_\_\_\_.

- A. Sub-procedure or Sub
- B. Function procedure
- C. Event-handling procedure or event handler
- D. Property procedure

(1 mark)

**Q10**

```
Private Sub InputCheck()
    Dim strText As String
    strText = Trim (txtInput.Text)
    If strText = "" Then
        MsgBox("Please enter your Mother's name")
    End If
End Sub
```

Choose the **CORRECT** way to call the above Sub Procedure from an Event Procedure.

- A. Input Check
- B. Input Check()
- C. Call InputCheck()
- D. Call InputCheck

(1 mark)

Refer the following procedure for **Q11** and **Q12**.

```
Private Function TwoNumbers(ByVal first As Integer, &_
    ByVal second As Integer) As Integer

    Dim add As Integer
    add = first + second
    TwoNumbers = add
End Function
```

**Q11** Identify the return statement in the code.

- A. Private Function TwoNumbers()
- B. Dim add As Integer
- C. add = first + second
- D. TwoNumbers = add



(1 mark)



**Q12** Choose different style of writing a return statement from the code.

- A. Using the return keyword
- B. Assigning the value to the function name
- C. Using byVal keyword
- D. Using byRef keyword

(1 mark)

**Q13** Choose an expected output if the following function is implemented.

```
lblOutput.Text = Len("Syahmie Iqbal")
```

- A. 7
- B. 5
- C. 12
- D. 13

(1 mark)

**Q14** Identify logical operators used for writing compound conditions.

- i. And
- ii. Or
- iii. Not
- iv. Nor

- A. i and ii
- B. ii and iii
- C. i, ii and iii
- D. All of the above

(1 mark)

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**Q15** Choose the **CORRECT** statement to differentiate between Do Until Loop and Do While Loop:

- i. The statement inside a Do Until Loop may never be executed if the terminating condition is True at the first time it is tested.
- ii. The statement inside a Do While Loop may will always executed at least once.
- iii. The statement inside a Do Until Loop may will always executed at least once.
- iv. The statement inside a Do While Loop may never be executed if the terminating condition is False at the first time it is tested.

- A. i dan ii
- B. i dan iv
- C. ii dan iii
- D. ii dan iv

(1 mark)

**Q16** Determine the value of lblStatus.Text if the following code is being implemented and the value of intTemp is 66.

```
If intTemp <= 32 Then
    lblStatus.Text = "Freezing"
Else
    If intTemp > 80 Then
        lblStatus.Text = "Hot"
    Else
        lblStatus.Text = "Moderate"
    End If
End If
```

- A. Freezing
- B. Hot
- C. Moderate
- D. NULL

(1 mark)

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**Q17** Choose the **CORRECT** answer to fill in the blank for the following code segment.

```
Dim creamcake As String
Dim DietState As String
creamcake = txtChoose.Text
Select Case _____
    Case "Eaten"
        DietState = "Diet Ruined"
    Case "Not Eaten"
        DietState = "Diet Not Ruined"
    Case Else
        DietState = "Didn't check"
End Select
MsgBox (DietState)
```

- A. creamcake
- B. DietState
- C. txtChoose.Text
- D. Diet

(1 mark)

**Q18** Determine the **CORRECT** value of lblResult.Text for the following code segment.

```
Dim answer, startNumber As Integer
answer = 1
For startNumber = 1 to 5
    answer = answer + startNumber
Next startNumber
lblResult.Text = answer
```

- A. 22
- B. 16
- C. 11
- D. 7

(1 mark)

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**Q19** Choose the **CORRECT** code segment when the code in **Q18** converted to Do Until Loop

A. 

```
Dim startNumber As Integer = 1
Dim answer As Integer = 1
Do Until startNumber = 5
    answer = answer + startNumber
Loop
lblResult.Text = answer
```

B. 

```
Dim startNumber As Integer = 1
Dim answer As Integer = 1
Do
    answer = answer + startNumber
Loop Until startNumber = 5
lblResult.Text = answer
```

C. 

```
Dim startNumber As Integer = 1
Dim answer As Integer = 1
Do Until
    answer = answer + startNumber
Loop startNumber = 5
lblResult.Text = answer
```

D. 

```
Dim startNumber As Integer = 1
Dim answer As Integer = 1
Do
    answer = answer + startNumber
Until startNumber = 5
lblResult.Text = answer
```

(1 mark)

**Q20** Choose the **CORRECT** syntax for determining the number of items in a list.

- A. `intNumber = lstVegetable.Count`
- B. `intNumber = Items.Count`
- C. `intNumber = lstVegetable.Count.Items`
- D. `intNumber = lstVegetable.Items.Count`

(1 mark)

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**Q21** Identify the value of `TestScore(2)` in the following code segment.

```
Dim TestScore(4) As Integer
TestScore = {98, 97, 96, 95, 94}
```

- A. 98
- B. 97
- C. 96
- D. 95

(1 mark)

**Q22** Given a two-dimensional array as follows:

```
Dim multiArray (,) As Integer = New Integer(,) {{1,2}, {3,5}}
lblAnswer.Text = multiArray(1, 1)
```

Choose the value of `lblAnswer.Text`.

- A. 1
- B. 2
- C. 3
- D. 5

(1 mark)

**Q23** \_\_\_\_\_ are pages that your users request using their browser.

- A. Web Pages
- B. Web Forms
- C. Master pages
- D. Websites

(1 mark)

**Q24** When creating a web application using ASP.Net, the HTML or XML elements and server controls are stored in a file with \_\_\_\_\_ extension.

- A. .asp
- B. .aspx
- C. .vb
- D. .master

(1 mark)

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**Q25** Identify a basic database terminology for X in the **Table Q25**.

- A. Field
- B. Row
- C. Record
- D. Composite key

(1 mark)

**Q26** A table feature for the number of character that can be stored in each text field is known as \_\_\_\_\_.

- A. field length
- B. data type
- C. file size
- D. referential integrity

(1 mark)

**Q27** Choose the **CORRECT** query to display all the staff details where the second letter in the first name is 'i'.

```
student(studentcode, firstname, lastname, email, contactno, address)
```

- A. `select firstname from student where firstname like '_i_'`
- B. `select firstname from student where firstname like '%i%'`
- C. `select firstname from student where firstname like '%i_'`
- D. `select firstname from student where firstname like '_i%'`

(1 mark)

**Q28** Choose the **CORRECT** data providers in ADO.NET framework.

- A. .NET Framework Data Provider for SQL Server – A Data provider that provides access to Microsoft SQL Server 7.0 or later version and it uses the System.Data.SqlClient namespace
- B. .NET Framework Data Provider for MySQL Server – A Data provider that provides access to Microsoft MySQL Server 7.0 or later version and it uses the System.Data.MySqlClient namespace
- C. .NET Framework Data Provider for SQLI Server – A Data provider that provides access to Microsoft SQLI Server 7.0 or later version and it uses the System.Data.SqliClient namespace
- D. .NET Framework Data Provider for SQLdata Server – A Data provider that provides access to Microsoft SQL.data Server 7.0 or later version and it uses the System.Data.SqlDataClient namespace

(1 mark)

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- Q29** Choose the **BEST** statement to define DataSet object in ADO.NET.
- A. It is set to be a collection of data with a tabular column representation
  - B. It is set to be a collection of data with a tabular cell representation
  - C. It is set to be a collection of data with a tabular row representation
  - D. It is set to be a collection of data with a tabular field representation

(1 mark)

- Q30** The following code segment select specific data from a table. Identify Y.

```
Dim ds As New Y  
DataAdapter.Fill(Y, 5, 3, "Authors")
```

- A. DataTable
- B. DataSet
- C. Data Adapter
- D. DataRow

(1 mark)

- Q31** Choose the **BEST** statement to describe the code segment at **Q30**.

- A. select data from Authors table
- B. display row no 5 to 3 rows
- C. select data from Authors table and display row no 5 to 3 rows
- D. select data from Authors table and display row no 3 to 5 rows

(1 mark)

- Q32** Identify the property of a database that must contain a connection object.

- A. Location and Query
- B. Location and Type
- C. Query and Command
- D. Location and Query

(1 mark)

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**Q33** Choose the **CORRECT** statements to describe the following codes:

```
conn.Open()  
links.Connection = conn  
links.CommandText="insert into Student(Id,Name,Address,NoTel)  
values ('" & stuName.Text & "','" & stuName.Text & "','" &  
stuAdd.Text & "','" & stuTel.Text & "'"") links.ExecuteNonQuery()  
MsgBox("Data Saved")  
conn.Close()
```

- i. conn.Open( ) is used to establish a connection to database.
  - ii. The sql statement in above is used to update data in database.
  - iii. ExecuteNonQuery( ) does not return data at all: only the number of rows affected by an insert, update, or delete.
  - iv. Student can be considered as database name.
- A. i only  
B. i, ii and iv  
C. i and iii  
D. ii and iii

(1 mark)

**Q34** \_\_\_\_\_ is use by programmer to close connection and bind the data into a Gridview to be displayed.

- A. connection.close() and dataGridView1.DataSource  
B. connection.timeout() and dataGridView1.DataSource  
C. connection.open() and dataGridView1.DataSource  
D. connection.on() and dataGridView1.DataSource

(1 mark)

**Q35** To view data from a database at DataGridView, you need to drag a data source and drop onto a form. Then, automatically an object \_\_\_\_\_ from the Component Designer tray will be added.

- A. BindingSource  
B. TableAdapter  
C. DataSet  
D. DataAdapter

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(1 mark)

**Q36** Choose the **BEST** code statement to put some data into a dataset called `CustomerDataset` using the `CustomerDataAdapter` object.

- A. `CustomerDataset.Fill(CustomerDataAdapter)`
- B. `CustomerDataAdapter.Load(CustomerDataset)`
- C. `CustomerDataset.Load(CustomerDataAdapter)`
- D. `CustomerDataAdapter.Fill(CustomerDataset)`

(1 mark)

**Q37** Choose the **CORRECT** way to implement input validation.

- i. `TryParse` Method
- ii. `TextBox.TextChanged` Event
- iii. `Try` keyword

- A. i only
- B. i and ii
- C. ii and iii
- D. i, ii, and iii

(1 mark)

**Q38** Select an advantage for input validation in order to implement an effective and secure VB code.

- A. To prevent user from submitting blanks value
- B. To handle runtime errors
- C. To check syntax error
- D. To list all the user input

(1 mark)

**Q39** "Failure of a numeric conversion, such as `Integer.Parse` or `Decimal.Parse`. Usually blank or nonnumeric data"

Classify the types of exception for the above situation.

- A. `System.IO.IOException`
- B. `System.InvalidCastException`
- C. `System.OutOfMemoryException`
- D. `FormatException`

(1 mark)

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**Q40** Choose the **CORRECT** match between keywords used for handling exception and its description.

	Keywords	Description
i.	Try	Identifies a block of code for which particular exceptions will be activated. It's followed by one or more Catch blocks.
ii.	Catch	Catches an exception with an exception handler at the place in a program where you want to handle the problem. The Catch keyword indicates the catching of an exception.
iii.	Throw	Used to execute a given set of statements, whether an exception is thrown or not thrown.
iv.	Throw	A program throws an exception when a problem shows up.

- A. i, ii, iii and iv
- B. i, ii and iii
- C. i, ii and iv
- D. i and ii

(1 mark)

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## PART B

- Q41 (a) Write a declaration Const statement of the following situation and indicate where the declaration statement will be written.

The “service tax rate” that cannot be changed during execution of the program but will be used by multiple procedures.

(2 marks)

- (b) (i) Prepare a flowchart for the following program segment:

```
If intTemp > 32 Then
    If intTemp > 80 Then
        lblComment.Text = "Hot"
    Else
        lblComment.Text = "Moderate"
    End If
Else
    lblComment.Text = "Freezing"
End If
```

(5 marks)

- (ii) Write the text of output displayed after the following code implemented.

```
Dim var As Integer
Dim startVal As Integer = 1
Dim endVal As Integer = 5
Dim total As Integer = 0

For var = startVal To endVal
    total = total + var
    MsgBox("Message Box Shows "& var & _
        " Times and current total is "& total)
Next var
```

(5 marks)

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- (c) Given the number of students from Department of Information Technology by course as follows:

Course	Number of Students
Java Programming	145
E-Commerce	150
Dot Net Programming	163
Principles of Programming	187
Computer Ethics	179

- (i) Write a code to declare an array for the “Course” and “Number of Students”.  
(3 marks)

- (ii) Write a code to assign all values to the arrays “Course” and “Number of Students” in the frmArray\_Load section.

```
Private Sub frmArray_Load(sender As Object, e As EventArgs) _
    Handles MyBase.Load
```

**Write your code here**

```
End Sub
```

(5 marks)

- (iii) Write a code to display all information from “Course” and “Number of students” using a listbox.

(2 marks)

- Q42 (a)** A company needs a web application to compute the total price of any item in inventory. **Figure Q42(a)** show a web form for the application “Computing Inventory Price”. The form will enable user to input values into three textboxes including product description, quantity on hand, and product cost.

- (i) Construct a VB.Net code to perform click event for Compute button. From the event, the total value of the total price of any item in inventory will be calculated and display as shown in **Figure Q42(a)**.

(8 marks)

- (ii) Construct VB.Net code to validate the input quantity on hand at txtquantity using Integer.TryParse Method.

(3 marks)

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- (b) After implementing the event procedure, an error message will popping up as shown in **Figure Q42(b)**.

```
Private Sub btnCalculate_Click(ByVal sender As System.Object, _  
    ByVal e As System.EventArgs) Handles btnCalculate.Click  
  
    Dim i As Integer  
    Dim resultValue As Integer  
    i = 100  
    resultValue = i / 0  
    MsgBox("The result is " & resultValue)  
  
End Sub
```

- (i) Recognize the type of exception class to handle errors generated from the arithmetic calculation. (2 marks)
- (ii) Rewrite the above code by applying `Try... Catch` statement to handle the exception. (4 marks)
- (iii) Differentiate the uses of `Catch` keyword and `Finally` keyword for handling exception in VB.Net. (2 marks)

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**Q43 (a)** There are many .NET Framework Data Providers in ADO.NET that can be deploy to access data. List **THREE (3)** .NET Framework Data Providers along with its namespace.

(3 marks)

**(b)** Fill in the blank spaces (i) to (iv) with appropriate answer.

```

Private Sub btnSaved_Click(ByVal sender As System.Object, _
                           ByVal e As System.EventArgs) _
    Handles btnSaved.Click
Dim conn As _____ (i)

Dim Mycmd As SqlCommand

conn=New SqlConnection("server=localhost;uid=sa;pwd=;" &
                       "database=abc")

conn. _____ (ii)

Mycmd = New SqlCommand("_____ (iii) student([name],[address])"&
                       " values ('" & txtName.Text & "','" &
                       "'" & txtAdd.Text & "'"")",conn)

Mycmd. _____ (iv)

conn.close()
End Sub
    
```

(4 marks)

**(c)** Assumes yourself as database admin. Your responsibility is to manage the database by deploying any essential SQL statement to manipulate the data in database table. Below are Student table that require you to manage.

Name	MatricNo	City
Abdullah	12345	Parit Raja
Gabriel	11111	Batu Pahat
Uwais	22222	Kluang
Michael	33333	Air Hitam
Sani	44444	Parit Raja

Construct SQL statements to:

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**(i)** Insert a new data into table Student.

(2 marks)

**(ii)** Delete record according to MatricNo = 11111.

(2 marks)

**(iii)** Update the City from "Parit Raja" to "Johor Baharu".

(2 marks)

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- (iv) Select all record from table `Student` where City is “Kluang” or “Air Hitam”.  
(2 marks)
- (v) Remove a table `Student` from the database.  
(2 marks)
- (vi) Display all student name with matric number greater than 1111.  
(2 marks)

**-END OF QUESTION-**

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FINAL EXAMINATION

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PROGRAMME : DAT  
COURSE CODE : DAT20903

Table Q25

X

	Student ID	First Name	Last Name
+	12345	Dan	Wilson
+	12346	Wu	Peng
+	13245	Susan	Metters
+	13246	Jose	Lugo

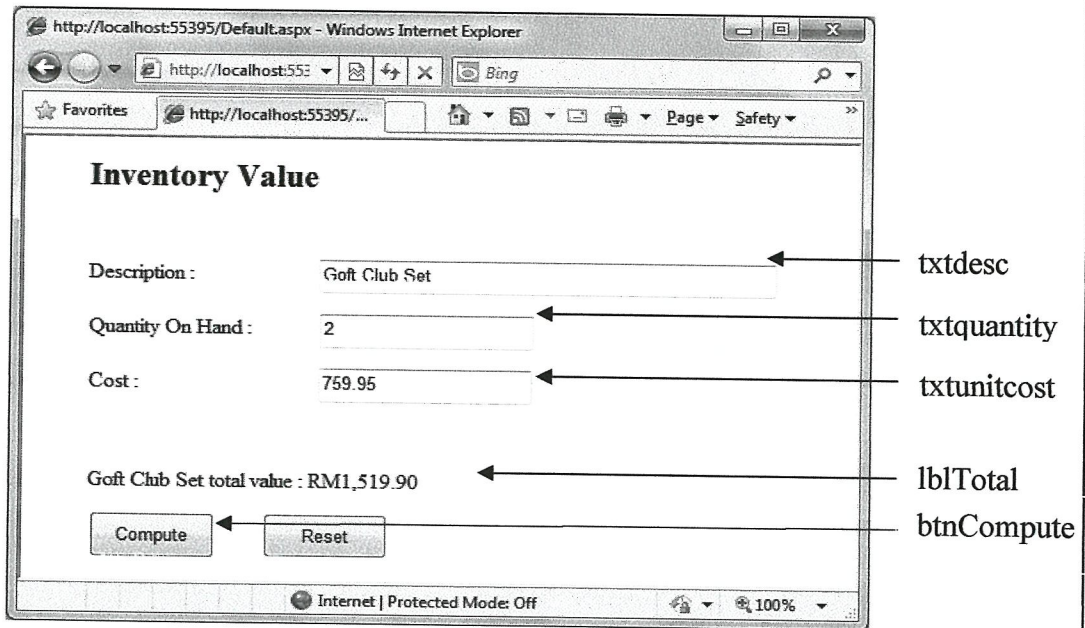


Figure Q42(a)

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FINAL EXAMINATION

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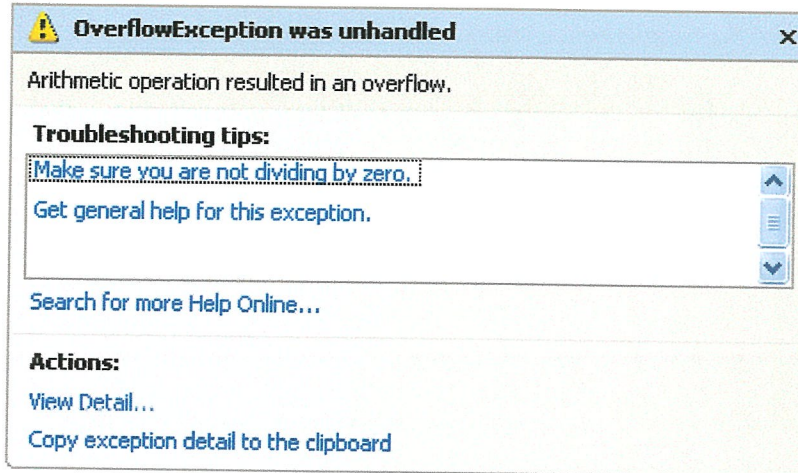


Figure Q42(b)

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