

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

PEPERIKSAAN AKHIR
SESI JUN 2015

FP613: .NET TECHNOLOGY

TARIKH : 05 NOVEMBER 2015
MASA : 8.30 AM – 10.30 AM (2 JAM)

Kertas ini mengandungi **TUJUH BELAS (17) halaman bercetak.**

Bahagian A: Objektif (20 soalan)

Bahagian B: Struktur/Esei (4 soalan)

Dokumen sokongan yang disertakan : Tiada

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

Project Alpha

Project Alpha is a research project focused on developing a new algorithm for image processing.

The project is currently in its initial phase, with the following tasks completed:

Completed Tasks

Task 1: Initial requirements gathering and system design.

Task 2: Development of core algorithmic components (image segmentation, feature extraction).

Task 3: Integration of machine learning models.

Task 4:

SECTION A : 30 MARKS
BAHAGIAN A : 30 MARKAH

INSTRUCTION:

This section consists of TWENTY (20) objective questions. Mark your answers in the OMR form provided.

ARAHAN:

Bahagian ini mengandungi DUA PULUH (20) soalan objektif. Tandakan jawapan anda di dalam borang OMR yang disediakan.

CLO1
C1

1. What does CLR stand for?
Apakah maksud CLR?
 - A. Common Language Runtime
 - B. Common Line Runtime
 - C. Connection Language Runtime
 - D. Console Language Runtime

CLO2
C1

2. Which object control is used to display information entered during design time by a user at runtime or assigned within the code.
Kawalan objek yang manakah digunakan untuk memaparkan maklumat yang dimasukkan pada masa reka bentuk oleh pengguna pada masa larian atau diberikan dalam kod.
 - A. Label
 - B. Textbox
 - C. Listbox
 - D. Combobox

CLO2
C1

3. Which function could you use if you want the users to type in the name of the town they live in?
Fungsi yang manakah yang patut anda gunakan jika anda menginginkan pengguna menaip masuk nama bandar yang mereka tinggal?
 - A. MsgBox
 - B. TextBox
 - C. InputBox
 - D. TypeBox

CLO2
C1

4. Select the **CORRECT** code to receive an input from textbox.
Pilih kod aturcara yang BETUL untuk menerima input dari textbox.

- A. InputBox("Please enter an integer value:")
- B. InputBox("Please enter an integer value:");
- C. InputBox(Please enter an integer value:)
- D. InputBox = ("Please enter an integer value:")

CLO2
C1

5. `MessageBox. _____ (`
 "Please enter a name and check at least one item",
 "Missing Information", MessageBoxButtons.OK,
 MessageBoxIcon. _____)

Figure A1 / Rajah A1

Based on the code in Figure A1, fill in the blank with the **CORRECT** answer to display an error message in a dialog.

Berdasarkan aturcara dalam Rajah A1, isikan tempat kosong dengan jawapan yang BETUL untuk memaparkan dialog mesej ralat.

- A. Display, Information
- B. Show, Information
- C. Message, Error
- D. Show, Error

CLO2
C2

6. Calculate the value of **a** when the statement below is executed.
Kira nilai a apabila pernyataan di bawah dilaksanakan.

```
Dim a As Integer
a = 12 - 5 + 10 * 8 / 4
```

- A. -18
- B. 18
- C. 27
- D. 37

- CLO2 7. Which of the following is the type of error that will occur if your program runs but generates the wrong output for the input provided?

Yang manakah diantara berikut adalah jenis kesalahan yang berlaku jika program yang dilarikan menghasilkan output yang salah untuk input yang disediakan?

- A. Run-time error / Kesalahan masa larian
- B. Logic error / Kesalahan logic
- C. Compilation error / Kesalahan kompilasi
- D. Minor error / Kesalahan minor

- CLO2 8. What is the output of the following code?
Apakah output kod berikut?

```
MyString="Politeknik Kuching"
LeftString=left(MyString,12)
```

- A. Kuching
- B. Politeknik K
- C. knik Kuching
- D. Politeknik Kuching

- CLO2 9. Based on following code below, choose the **CORRECT** answer when a user enters the input value $x = 4$ and input value $y = 3$.

*Berdasarkan kod di bawah, pilih jawapan yang **BETUL** apabila pengguna memasukkan nilai input $x = 4$ dan nilai input $y = 3$.*

```
Dim x As Integer
Dim y As Integer
Dim Result As Integer

x = InputBox("Please enter the x value", "Value Input")
y = InputBox("Please enter the y value", "Value Input")

Result = x / y

MessageBox.Show(Result, "Result of Division")
```

- A. 0
- B. 1
- C. 2
- D. 3

12	56	2	90	78
100	55	67	45	65

Table A1 / Jadual A1

CLO2
C3

10. Based on Table A1, choose the **CORRECT** statement to create an Integer array of two rows and five columns.

Berdasarkan Jadual A1, pilih pernyataan yang **BETUL** untuk mewujudkan tatasusunan berjenis Integer yang mempunyai 2 baris dan 5 lajur.

- A. New Integer (0 To 2, 0 To 5) {}
- B. New Integer (0 To 1, 0 To 5) {}
- C. New Integer (0 To 1, 0 To 4) {}
- D. New Integer (0 To 2, 0 To 4) {}

CLO2
C3

11. Choose an appropriate **For...Next** header to vary the control variable over the following sequence of value:

25, 20, 15, 10, 5

Pilih antara berikut yang manakah adalah sesuai untuk **For...Next** header bagi mempelbagaikan pembolehubah kawalan ke atas urutan nilai berikut:

25, 20, 15, 10, 5

- A. For intX = 25 To 5 Step 5
- B. For intX = -25 To 5 Step - 5
- C. For intX = 25 To -5 Step - 5
- D. For intX = 25 To 5 Step - 5

CLO2
C3

12. What is the final value of intNumber after the following code is completed?
Apakah nilai akhir intNumber selepas kod yang berikut diselesaikan?

For intNumber = 1 to 20 Step 3

- A. 1
- B. 4
- C. 18
- D. 20

CLO2

13. DataSet is used for ...

DataSet digunakan untuk ...

- A. filling a DataSet from a data source.
mengisi DataSet daripada punca data
- B. represents a connection to a data source.
mewakili sambungan kepada punca data
- C. hold information from a data source.
menyimpan maklumat dari punca data.
- D. filling a DataAdapter
digunakan untuk mengisi DataAdapter

CLO2

14. Which database is designed for the ADO.NET SqlConnection object?

Pangkalan data yang manakah direka untuk objek ADO.NET SqlConnection?

- A. Access
- B. Microsoft SQL Server
- C. Oracle
- D. MySQL

CLO2

15. In a database, a field is a ...

Dalam sesuatu pangkalan data, 'field' merupakan ...

- A. group of records./ *satu kumpulan rekod.*
- B. index that locates information in a table./ *indeks yang menempatkan maklumat dalam jadual.*
- C. category of information in a table./ *kategori maklumat dalam jadual.*
- D. code that represents a record./ *kod yang mewakili rekod.*

CLO2
C2

16. The first step of configuring a DataAdapter is to select...

Langkah pertama mengkonfigurasi DataAdapter adalah memilih...

- A. an adapter object.
- B. a connection object.
- C. a database object.
- D. a dataset object.

CLO2
C2

17. What does the following **SELECT** statement do?
*Apakah yang dilakukan oleh pernyataan **SELECT** berikut?*

```
Select Age From Student Where FirstName = 'Haliza'
```

- A. It selects the Age of the student with the first name Haliza from table Student
Pilih Age pelajar yang nama pertama pelajar Haliza dari jadual Student
- B. It selects the value Haliza from the Age table of the Student database
Pilih nilai Haliza dari jadual Age dari pangkalan data Student.
- C. It selects the age of the student with the first name Haliza from the Student database
Pilih Age pelajar dengan nama pertama Haliza dari pangkalan data Student
- D. It selects the Student field from the Age table with the first name Haliza
Pilih medan Student dari jadual Age dengan nama pertama Haliza.

CLO2
C3

18. Which is the **CORRECT** statement to make a database connection based on the code segment below?

*Penyataan manakah yang **BETUL** untuk membuat penyambungan pangkalan data berdasarkan kepada segmen kod di bawah?*

```
Dim conn As New MySqlConnection
Dim dbSource As String

dbSource = "server=localhost;user id= root;password=;
database= addressbook"
```

CLO2
C2

19. The _____ function is used to find out the number of characters in any given string.

Fungsi _____ adalah untuk mencari jumlah karakter bagi setiap rentetan aksara yang diberi.

- A. Len
- B. Sub
- C. Mid
- D. Insert

CLO2
C3

20. What is the output based on code segment below?
Apakah output berdasarkan segmen kod di bawah?

```
Dim courseName As String  
courseName = "VB.Net Programming"  
lblOutput.Text = courseName.Substring(8, 11)
```

- A. Programm
- B. Programming
- C. VB.Net
- D. VB.Net Programming

SECTION B : 70 MARKS**~~BAHAGIAN B : 70 MARKAH~~****INSTRUCTION:**

This section consists of **TWO (2)** structured questions and **TWO (2)** Essay question . Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi **DUA (2)** soalan berstruktur dan **DUA (2)** soalan esei. Jawab semua soalan.

QUESTION 1***SOALAN 1***CLO1
C2

- a) Based on the statement below, state the suitable Integrated Development Environment (IDE) windows.

Berdasarkan penyataan di bawah, nyatakan tetingkap Integrated Development Environment (IDE) yang sesuai.

- i. Allow programmers to modify controls visually, without writing code.

Mbenarkan pengaturcara untuk mengubah suai kawalan secara visual, tanpa menulis kod.

- ii. Contains controls used to customize forms.

Mengandungi kawalan yang digunakan untuk menyesuaikan borang.

[2 marks]

[2 markah]

CLO2
C1

- b) i. Define Variable.

Berikan definisi Pembolehubah.

[2 marks]

[2 markah]

- ii. List **TWO (2)** examples of data types.

Senaraikan DUA (2) contoh jenis data.

[2 marks]

[2 markah]

- iii. Draw the output from the following code in Figure B1.
Lukis output berdasarkan kod aturcara dalam Rajah B1.

[2 marks]

[2 markah]

```
MessageBox.Show ("Terima Kasih..", "Tamat",
MessageBoxButtons.OK, MessageBoxIcon.Information)
```

Figure B1 / Rajah B1

CLO2
C2

- c) i. Explain the difference between Message Box and Input Box.
Terangkan perbezaan di antara Message Box dan Input Box.

[2 marks]

[2 markah]

- ii. Determine suitable naming prefix for the following object control then write an example name for each object control.

Kenalpasti nama prefix yang sesuai untuk kawalan objek berikut kemudian tuliskan contoh nama bagi setiap kawalan object berikut.

1. Label
2. TextBox

[4 marks]

[4 markah]

CLO2
C3

- d) Write the program code to display the MessageBox below:
Tuliskan kod program untuk memaparkan MessageBox di bawah:

i.



Figure B2 / Rajah B2

[4 marks]

[4 markah]

ii.

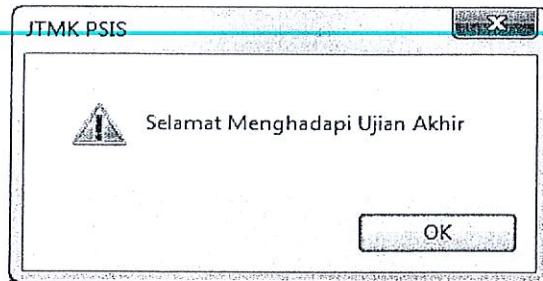


Figure B3 / Rajah B3

[2 marks]

[2 markah]

QUESTION 2**SOALAN 2**CLO2
C1

- a) i. Define dataAdapter.
Takrifkan dataAdapter.

[2 marks]

[2 markah]

- ii. Identify the function of dataAdapter.
Tentukan fungsi dataAdapter.

[2 marks]

[2 markah]

CLO2
C2

- b) What are the names of the listbox properties that are used to bind a list box to a field in a DataSet table?

Apakah nama properti kotak senarai yang digunakan untuk mengikat kotak senarai kepada medan dalam jadual DataSet?

[2 marks]

[2 markah]

CLO2
C3

- c) Write the statement to create a DataSet object.
Tuliskan pernyataan untuk mencipta object DataSet.

[2 marks]

[2 markah]

- CLO2 d) Based on the code segment below, write the output when the segment code is executed.
C1 *Berdasarkan segmen kod di bawah, tulis paparan yang akan dikeluarkan apabila segmen kod di laksanakan.*

```
Dim builder As StringBuilder = New StringBuilder("JABATAN  
PENGAJIAN POLITEKNIK")  
Console.WriteLine(builder)  
  
Dim output as String  
output = console.WriteLine(builder.Remove(0, 18))  
console.WriteLine(output)  
output = builder.Append(" SULTAN ABDUL HALIM MUADZAM SHAH ")  
console.WriteLine(output)
```

[2 marks]

[2 markah]

- CLO2 e) List TWO (2) functions in StringBuilder class and give an example.
C2 *Senaraikan DUA (2) fungsi di dalam kelas StringBuilder beserta contoh.*

[2 marks]

[2 markah]

CLO2
C3

- f) Complete the following code using Try...Catch...Finally.

Lengkapkan kod aturcara berikut menggunakan Try...Catch...Finally.

```
Dim x As Integer
Dim resultVal As Integer

_____
x = 100
resultVal= x / 0

_____ ex As Exception

MessageBox.show("The result is = 0")
```

```
MessageBox.show("The result is " & resultVal)
```

[2 marks]

[2 markah]

QUESTION 3**SOALAN 3**CLO1
C1

- a) Identify the purpose of:

Kenalpasti kegunaan:

- i. Solution Explorer Window / *Tetingkap Solution Explorer*
- ii. Form Designer Window / *Tetingkap Form Designer*

[3 marks]

[3 markah]

CLO2
C1

- b) i. Identify types of error in Visual Basic.Net.

Tentukan jenis-jenis kesalahan dalam Visual Basic.Net.

[3 marks]

[3 markah]

- ii. Define class and give an example.

Berikan definisi class beserta contoh.

[3 marks]

[3 markah]

CLO2
C2

- c) i. Identify the output based on the following code segment.

Kenalpasti output berdasarkan segmen kod berikut.

```
Dim x As Integer
    x = 1

    Do While x <= 12
        lstNumber.Items.Add(x)
        x = x + 2
    Loop
```

[3 marks]

[3 markah]

CLO2
C2

- ii. Convert the following **If...Else** statement to **Select Case** statement.

*Tukarkan penyataan **If...Else** berikut kepada penyataan **Select Case**.*

```
If age <= 12 Then
    lblStatus.Text = "Child"
    ElseIf age <= 18 Then
        lblStatus.Text = "Teenager"
    Else : lblStatus.Text = "Adult"
End If
```

[3 marks]

[3 markah]

CLO2
C3

- d) Below is a program to create an Exam Class.

Di bawah merupakan program untuk mencipta Kelas Exam.

```
Public Class Exam
    Dim Mark1, Mark2 As Integer
    Sub Print( )
        MsgBox ("The answer is :", add (30,30) )
    End Sub
    Public Function add (ByVal Mark1 As Integer, ByVal Mark2
As Integer) As Integer
        Return (Mark1+Mark2)
    End Function
End Class
```

- i. Write a program to call sub procedure **Print()** using **Exam** class object.

*Tulis pengaturcaraan untuk panggil sub prosedur **Print()** menggunakan objek bagi kelas **Exam**.*

[4 marks]

[4 markah]

- ii. Sketch the output based on the complete program in d (i).

Lakarkan hasil keluaran berdasarkan pengaturcaraan dalam d(i).

[2 marks]

[2 markah]

QUESTION 4**SOALAN 4**CLO2
C1

- a) List **THREE (3)** ADO.NET object model.
*Senaraikan **TIGA (3)** model objek ADO.NET.*

[3marks]

[3markah]

CLO2
C2

- b) Create a new DataAdapter object named **da**, pass the object to the variable with arguments SQL string and Connection object.
*Bina objek DataAdapter baru bernama **da**, menghantar objek kepada pembolehubah bersama rentetan argumen SQL dan objek Connection.*

[3marks]

[3markah]

```
Dim c As New OleDb.OleDbConnection
    Dim dbProvider1 As String
    Dim dbSource1 As String

    dbProvider1 = "PROVIDER=Microsoft.Jet.OLEDB.4.0;"
    dbSource1 = "Data Source = C:/StudentInfo.mdb"
```

Figure B4 / Rajah B4

CLO2
C3

- c) According to code segment in Figure B4, you are required to write a statement to connect, open and close the database.

Merujuk kepada segmen kod dalam Rajah B4, tuliskan pernyataan untuk menyambung, membuka dan menutup pangkalan data tersebut.

[3 marks]

[3 markah]

CLO2
C3

- d) Produce the output for:

Hasilkan output untuk:

- i. The given string method.

Metod string yang diberikan.

```
Dim MyStr As String = "Welcome to Poli Dungun"
Dim NewStr As String
Dim RepStr As String
    NewStr = MyStr.Insert(15, "teknik ")
    lblDisplay.Text = NewStr
    RepStr = MyStr.Replace("Poli", "PSMZA")
    lblOutput.Text = RepStr
```

[3 marks]

[3 markah]

- ii. The given regular expression and identify the function of the expression \d+.

Bagi pernyataan yang diberikan dan kenalpasti fungsi pernyataan \d+.

```
Dim regex As Regex = New Regex("\d+")
    Dim match As Match = regex.Match("Dot 77 Perls")
    If match.Success Then
        lblOutput.Text = match.Value
    End If
```

[3 marks]

[3 markah]

END OF QUESTION

SOALAN TAMAT