

9

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

PEPERIKSAAN AKHIR
SESI DISEMBER 2015

FP613: .NET TECHNOLOGY

TARIKH : 08 APRIL 2016 (JUMAAT)
MASA : 8.30 AM - 10.30 AM (2 JAM)

Kertas ini mengandungi DUA PULUH SATU (24) halaman bercetak.

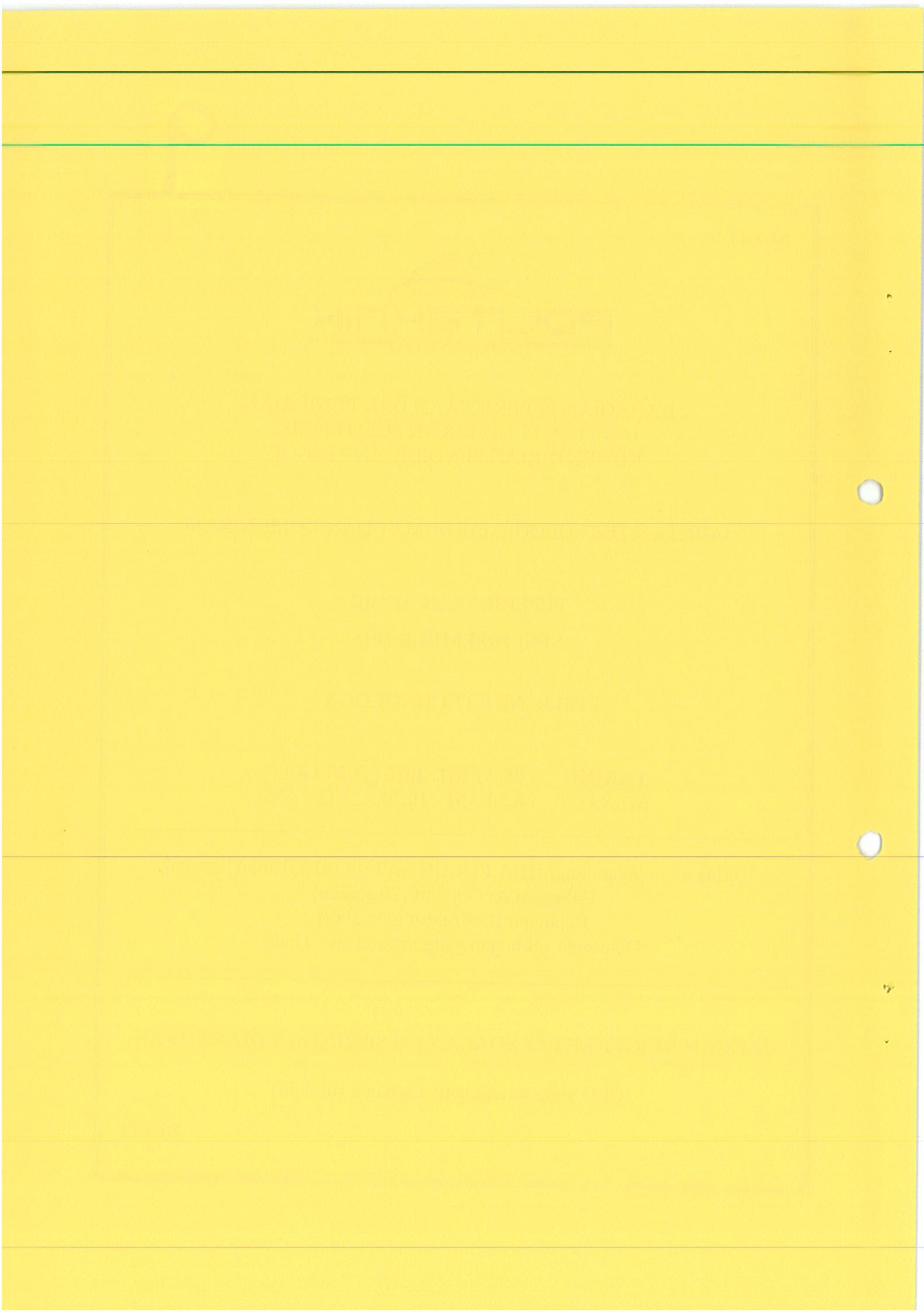
Bahagian A: Objektif (20 soalan)

Bahagian B: Struktur (4 soalan)

Dokumen sokongan yang disertakan : Tiada

JANGAN BUKA KERTAS SOALANINI SEHINGGA DIARAHKAN
(CLO yang tertera hanya sebagai rujukan)

SULIT



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. Identify which of the following is NOT a part of architecture of .NET framework.

*Kenalpasti yang manakah antara berikut **BUKAN** sebahagian daripada seni bina rangka kerja .NET.*

- A. ASP .NET and Windows Form
- B. Common Language Runtime
- C. Operating System services
- D. Intermediate Language code

CLO2

C1

2. Identify the property that is used to modify the font color for label.

Kenalpasti ciri-ciri yang digunakan untuk mengubahsuai warna tulisan pada label.

- A. BackColor
- B. Background
- C. FontColor
- D. ForeColor

CLO2
C2

3. Select the correct operator to determine letter R as a keyboard access key.
Pilih operator yang betul untuk menentukan huruf R sebagai kekunci capaian.

Review

Figure A1 / Rajah A1

CLO2
C1

4. State the values of X and Y after the following code (Figure A2) is executed.
Nytakan apakah nilai untuk X dan Y selepas kod berikut (Rajah A2) dijalankan.

X,Y,8, 7, 6,5, 4, 3, 2, 1

For intCount as integer - 10 to 1 step -1

Figure A2 / Rajah A2

- A. X = 9 , Y = 8
- B. X = 10 , Y = 9
- C. X = 10 , Y = 11
- D. X = 11 , Y = 10

CLO2
C1

5. Identify the appropriate output when the segment code was executed as Figure A3.

Tentukan output yang sesuai apabila kod program dilaksanakan seperti Rajah A3.

```
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
    lblDateTime.Text = DateTime.Now.ToString("hh:mm dddd")
End If
```

Figure A3 / Rajah A3

- A. 02:30 Sun
- B. 02:30 Sunday
- C. 31 December 2015
- D. 31 Dec 2015

CLO2
C2

6. Choose which of the following are the components of an object.

Pilih yang manakah diantara berikut adalah komponen objek.

- i. Properties
 - ii. Methods
 - iii. Events
 - iv. Class
- A. i, iii and iv / i, iii dan iv
 - B. i, ii, and iii / i, ii, dan iii
 - C. i and iv / i dan iv
 - D. All of above / Semua di atas

CLO2
C2

7. Identify the type of error that will be occurred when the following program code (Figure A4) is executed.

Kenalpasti jenis kesalahan yang akan berlaku apabila kod program berikut (Rajah A4) di dilaksanakan.

```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
    Dim i As Integer
    For i = 10 To 1
        MessageBox.Show(i)
    Next
End Sub
```

Figure A4 / Rajah A4

- A. Syntax error / Kesalahan sintak
- B. Logic error / Kesalahan logik
- C. Runtime error / Kesalahan masa larian
- D. Semantic error / Kesalahan semantik

CLO2
C2

8. Following are the features of Object Oriented Programming concept. Select which feature allows one class to derive from another class.

Berikut adalah ciri-ciri konsep Pengaturcaraan Berorientasikan Objek. Pilih ciri yang membenarkan satu kelas mewarisi dari kelas yang lain.

- A. Encapsulation
- B. Inheritance
- C. Polymorphism
- D. Instantiation

CLO2
C2

9. Assume that a sub procedure named is CalculateValue accepts two integer parameters. Identify which of the following shows the correct sub procedure header.

Andaikan satu prosidur sub bernama CalculateValue menerima dua parameter integer. Tentukan yang manakah antara berikut menunjukkan kepala prosidur yang betul.

- A. Sub CalculateValue(byVal A as Intgere) As Integer
- B. Sub CalculateValue(byVal A as Integer, byVal B as Integer) As Integer
- C. Sub CalculateValue(byVal A as Integer, byVal B as Integer)
- D. Sub CalculateValue(byVal A as Integer, B as Integer)

CLO2
C3

10. Calculate the value of X when the statement below is executed (Figure A5).

Kira nilai X apabila pernyataan di bawah dilaksanakan (Rajah A5)

```
Dim X as Integer
X = 10 * 4 - 5 / 2 + 1
```

Figure A5 / Rajah A5

- A. 39
- B. 18.5
- C. 18
- D. 38

CLO2
C3

11. A base class contains a method named GetBonus. Choose which of the following procedure headers can be used in the base class to indicate that a derived class can provide its own code for the method.

Kelas asas mempunyai kaedah bernama GetBonus. Pilih yang manakah kepala prosidur berikut boleh digunakan di dalam kelas asas untuk menandakan kelas yang diwarisi boleh menyediakan kod yang tesendiri untuk kaedah berkenaan.

- A. Public Inherits Sub GetBonus()
- B. Public Overloads Sub GetBonus()
- C. Public Overridable Sub GetBonus()
- D. Public Overrides Sub GetBonus()

CLO2
C3

12. Calculate how many times the message box will be displayed if the following code is executed (Figure A6).

Kira berapa kali kotak mesej akan dipaparkan sekiranya kod seperti berikut dilaksanakan (Rajah A6).

```
Dim intKira As Integer
Do While(intKira < 5)
    MessageBox.Show("Hai")
    intKira +=1
Loop
```

Figure A6 / Rajah A6

- A. 0
- B. 4
- C. 5
- D. 3

CLO2

C1

13. Select which of the following is NOT true about ADO.NET.

Pilih pernyataan yang manakah TIDAK benar tentang ADO.NET.

- A. ADO.NET helps to create distributed data sharing applications.
ADO.NET membantu untuk membina aplikasi perkongsian data teragih.
- B. ADO.NET uses XML to transfer data across application and data source.
ADO.NET menggunakan XML memindahkan data melalui aplikasi dan sumber data.
- C. ADO.NET doesn't support disconnected architecture.
ADO.NET tidak menyokong senibina tidak terhubung.
- D. The classes of ADO.NET are defined in the System.Data namespace.
Kelas ADO.NET ditakrifkan dalam System.Data namespace.

CLO2

C1

14. DataAdapter is one of ADO.NET components. Identify the function of DataAdapter.

DataAdapter adalah salah satu komponen ADO.NET. Tentukan fungsi bagi DataAdapter.

- A. Fast, efficient, forward-only reading of a data source.
Cepat, cekap, bacaan secara ke hadapan sahaja bagi sumber data.
- B. Fill a DataSet from a data source.
Mengisi Dataset daripada sumber data.
- C. Represents a connection to a data source.
Mewakili satu sambungan kepada satu sumber data.
- D. Represents a query or a command that is to be executed by a data source.
Mewakili pertanyaan atau arahan yang akan dilaksanakan oleh sumber data.

CLO2
C2

15. Select the first step of configuring DataAdapter.
Pilih langkah pertama konfigurasi DataAdapter.

- A. Select an adapter object.
Memilih objek adapter.
- B. Select connection object.
Memilih objek sambungan.
- C. Select a database object.
Memilih objek pangkalan data.
- D. Select a dataset object.
Memilih objek dataset.

CLO2
C2

16. According to the segment below (Figure A7), choose the statement to create database connection.

Merujuk kepada segmen di bawah (Rajah A7), pilih pernyataan untuk membuat penyambungan pangkalan data.

```
Dim conn As New MySqlConnection  
Dim dbSource As String  
  
dbSource = "server=localhost;user id= root;password=;  
database= addressbook"
```

Figure A7 / Rajah A7

- A. con.Connection = SqlConnection
- B. conn.Connection = dbSource
- C. conn.ConnectionString = SqlConnection
- D. conn.ConnectionString = dbSource

CLO2
C3

17. Choose the proper code to allocate the data into the dataset called CustomerDataset using the CustomerDataAdapter object.

Pilih kod yang bersesuaian untuk meletakkan data ke dalam dataset yang dipanggil CustomerDataset menggunakan objek CustomerDataAdapter itu.

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

The screenshot shows a 'My Login' form. At the top left is a user icon. Below it, the text 'This will be the admin account for your account.' is displayed. There are two input fields: one for 'Name:' and one for 'Email:'. To the right of each input field is a validation message: 'can't be blank'.

Figure A8 / Rajah A8

CLO2
C1

18. Based on Figure A8 above, select the validation control to prompt message if any input field is left blank.

Berdasarkan rajah A8 di atas, pilih kawalan pengesahan yang meminta mesej jika sebarang medan input dibiarkan kosong.

- A. RegularExpression
Penyataanbiasa
- B. RequiredField
Lapangan diperlukan
- C. Range
Julat
- D. Comparison
Perbandingan

SULITCLO2
C2

19. RequiredFieldValidator is used to practice the effective and secure coding. Choose the function of RequiredField Validator.

RequiredFieldValidator digunakan untuk mempraktikkan aturcara yang selamat dan efektif. Pilih apakah fungsi bagi RequiredField Validator.

- A. Verify that an entry is within the specified minimum and maximum values.
Mengesahkan kemasukan di antara nilai maksimum dan minimum yang telah ditetapkan.
- B. Verify that an entry matches a specific pattern
Mengesahkan kemasukan sepadan dengan bentuk yang spesifik
- C. Verify that an entry passes the specified validation logic
Mengesahkan kemasukan adalah lulus validasi logik yang ditetapkan.
- D. Verify that a control contains data
Mengesahkan kawalan mengandungi data

CLO2
C3

20. Choose the best answer to complete the exception handling below (Figure A9).

Pilih jawapan terbaik untuk melengkapkan pengendalian pengecualian di bawah (Rajah A9).

```
TRY
    While dr1.Read()
        Me.lblSoalan.Text = dr1("question")
        Me.RadioButton1.Text = dr1("rightanswer")
        Me.RadioButton2.Text = dr1("wrong1")
        Me.RadioButton3.Text = dr1("wrong2")
        Me.RadioButton4.Text = dr1("wrong3")
    End While
    (i)
    -----
    MsgBox("Error", MsgBoxStyle.Exclamation, "Error")

    (ii)
    -----
    conn.Close()

    (iii)
    -----
```

Figure A9 / Rajah A9

- A. i. Catch ex
ii. Finally
iii. End
- B. i. Catch ex
ii. Lastly
iii. End Try
- C. i. Catch ex As Exception
ii. Finally
iii. End
- D. i. Catch ex As Exception
ii. Finally
iii. End Try

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

This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi EMPAT (4) soalan berstruktur. Jawab SEMUA soalan.

QUESTION 1 / SOALAN 1

CLO1

C2

- a) List **TWO (2)** advantages of Visual Studio .Net.

Senaraikan DUA (2) kelebihan Visual Studio .Net.

[2 marks]

[2 markah]

CLO2

C1

- b) i) Define array.

Takrifkan tatasusunan.

[2 marks]

[2 markah]

- ii) Write a syntax to declare a multidimensional array.

Tuliskan sintak untuk mengisyiharkan tatasusunan pelbagai dimensi.

[2 marks]

[2 markah]

- iii) Declare multidimensional array called “Mark” with 5 rows and 3 columns.

Isytiharkan tatasusunan pelbagai dimensi yang dipanggil “Mark” dengan 5 baris dan 3 lajur.

[2 marks]

[2 markah]

CLO2
C3

20. Choose the best answer to complete the exception handling below (Figure A9).

Pilih jawapan terbaik untuk melengkapkan pengendalian pengecualian di bawah (Rajah A9).

```
Try
    While dr1.Read()
        Me.lblSoalan.Text = dr1("question")
        Me.RadioButton1.Text = dr1("rightanswer")
        Me.RadioButton2.Text = dr1("wrong1")
        Me.RadioButton3.Text = dr1("wrong2")
        Me.RadioButton4.Text = dr1("wrong3")
    End While
    (i)
    -----
    MsgBox("Error", MsgBoxStyle.Exclamation, "Error")

    (ii)
    -----
    conn.Close()

    (iii)
    -----
```

Figure A9 / Rajah A9

- A. i. Catch ex
ii. Finally
iii. End
- B. i. Catch ex
ii. Lastly
iii. End Try
- C. i. Catch ex As Exception
ii. Finally
iii. End
- D. i. Catch ex As Exception
ii. Finally
iii. End Try

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

This section consists of FOUR (4) structured questions. Answer ALL questions.

ARAHAN:

Bahagian ini mengandungi EMPAT (4) soalan berstruktur. Jawab SEMUA soalan.

QUESTION 1 / SOALAN 1CLO1
C2

- a) List TWO (2) advantages of Visual Studio .Net.

Senaraikan DUA (2) kelebihan Visual Studio .Net.

[2 marks]

[2 markah]

CLO2
C1

- b) i) Define array.

Takrifkan tatasusunan.

[2 marks]

[2 markah]

- ii) Write a syntax to declare a multidimensional array.

Tuliskan sintak untuk mengisyiharkan tatasusunan pelbagai dimensi.

[2 marks]

[2 markah]

- iii) Declare multidimensional array called "Mark" with 5 rows and 3 columns.

Isytiharkan tatasusunan pelbagai dimensi yang dipanggil "Mark" dengan 5 baris dan 3 lajur.

[2 marks]

[2 markah]

SULITCLO2
C2

- c. i) Differentiate between Sub and Function Procedure.

Bezakan di antara Sub dan Function Procedure.

[2 marks]

[2 markah]

- ii) Given a program code as follows (Figure B1). What is the output if user enters width = 2 and length = 10.

Berdasarkan kod program yang diberi (Rajah B1). Apakah output jika pengguna memasukkan lebar = 2 dan panjang = 10.

```
Dim area As Integer
area = width * length
Return area
```

Figure B1 / Rajah B1

[1 mark]

[1 markah]

- iii) Rewrite the following if Else statement to Select ..Case statement (Refer Figure B2).

Tulis semula kenyataan if..Else ke kenyataan Select...Case (Rujuk Figure B2).

```
If intMark <= 40 Then
    lblComment.Text = "Fail"
Else
    lblComment.Text = "Pass"
```

Figure B2 / Rajah B2

[3 marks]

[3 markah]

CLO2 C3

- d) Answer the following questions based on the following selection structure below
(Figure B3):

Jawab soalan-soalan berikut berdasarkan struktur pilihan berikut(Rajah B3):

```
Dim intNum as integer
intNum = 1
Do While intNum < 5
    MsgBox(intNum)
Loop
```

Figure B3 / Rajah B3

- i) How many times will the Do loop statement be executed?

Berapa kalikah pernyataan gelung Do akan dilaksanakan?

[2 marks]

[2 markah]

- ii) Draw an output for the above statement.

Lukiskan output untuk kenyataan di atas.

[2 marks]

[2 markah]

- iii) Change the above statement to display the output by 5 times.

Ubah pernyataan di atas untuk memaparkan output sebanyak 5 kali.

[2 marks]

[2 markah]

QUESTION 2 / SOALAN 2

- a) Data Adapter is the component of ADO.NET.

Data Adapter adalah komponen ADO.NET.

CLO2
C1

- i. Briefly explain the Data Adapter

Terangkan secara ringkas berkenaan Data Adapter.

[1 Mark]

[1 Markah]

tblBook

Id_Book	Title	Publisher_ID
12345	Introduction to Computer	A
67891	Indahnya Beragama	B
45324	Visual Basic .Net 2015	A

Table B1 / Jadual B1

CLO2
C1

- ii. Based on the Table B1 above, write a SQL statement to display ID_Book, Title and PublisherID where PublisherID equal to 'A'

Berpandukan jadual pada Jadual B1 di atas tuliskan satu pernyataan SQL untuk memaparkan Id_Book, Title and PublisherID di mana PublisherID adalah 'A'.

[2 Marks]

[2 Markah]

CLO2
C2

- b) Explain the relationship between "primary key" in Child Table and "foreign key" in Parent Table with an appropriate example.

Terangkan kaitan antara "primary key" dalam Child Table dan "foreign key" dalam Parent Table dengan contoh yang bersesuaian.

[2 Marks]

[2 Markah]

CLO2
C3

- c) Explain both two lines of the statements below (Figure B4):

Terangkan kedua-dua penyataan di bawah (Rajah B4):

```
Dim da As OleDb.OleDbDataAdapter  
da = New OleDb.OleDbDataAdapter(sql, con)
```

Figure B4 / Rajah B4

[3 Marks]

[3 Markah]

CLO2
C1

- d) Explain the difference between method IndexOf() and Contains() for searching a string.

Terangkan perbezaan diantara kaedah IndexOf() dan Contains() untuk carian rentetan.

[2 Marks]

[2 Markah]

CLO2
C2

- e) What is the output from the following statement:

Apakah output daripada penyataan berikut:

strNama = "Pantai Cahaya Timur"

lblNumber.Text= strNama.Length()

[1 Mark]

[1 Markah]

CLO2
C3

- f) Draw the output for the following code statement (Figure B5):

Lukiskan output untuk penyataan kod berikut (Rajah B5):

[3 Marks]

[3 Markah]

```
Private Sub Button1_Click(sender As System.Object, e As
System.EventArgs) Handles Button1.Click
    Dim i As Integer
    Dim num(4) As Integer
    Try
        For i = 0 To 5
            num(i) = InputBox("Enter Integer Value:", "Exception")
        Next
    Catch ex As Exception
        MessageBox.Show("Index Out Of Bound")
    End Try
End Sub
```

Figure B5 / Rajah B5

QUESTION 3**SOALAN 3**CLO1
C1

- a) List
- THREE (3)**
- objects from ADO.NET.

*Senaraikan **TIGA (3)** objek daripada ADO.NET*

[3 marks]

[3 markah]

b)

$$\text{CylinderArea} = 2\pi r^2 + 2\pi rh$$

*Figure B6 / Rajah B6**The formula of cylinder area is shown as the above (Figure B6) equation.**Formula luas silinder digambarkan seperti persamaan di atas (Rajah B6).*CLO2
C2

- (i) Write a constant declaration for
- π
- by using global declaration. Given the value of
- π
- is 3.142.

Tulis pengisytiharan pemalar untuk π menggunakan pengisytiharan global. Diberi nilai bagi π adalah 3.142.

[3 marks]

[3 markah]

CLO2
C1

- (ii) Rewrite the given formula and present it in VB.NET environment.
-
- Tulis semula formula yang diberi dan persembahkan dalam persekitaran VB.NET.*

[3 marks]

[3 markah]

- c) Table B2 shows the data in integer number which represents the two-dimensional array.

Jadual B2 menunjukkan data dalam nombor integer yang mewakili tatasusunan dua dimensi.

20	41	35	100	14
87	99	56	30	2

Table B2 / Jadual B2

- CLO2
C2 (i) Write a two dimensional declaration shown at Table B2.

Tulis pengisytiharan tatasusunan dua dimensi yang ditunjukkan pada Jadual B2.

[3 marks]

[3 markah]

CLO2
C2

- (ii) Trace the output for the following expression based on Table B2.

Jejak output bagi persamaan di bawah berdasarkan Jadual B2.

- Number (2,4)
- number (1,3) = number (1,3) + 25
- sum = number (0,3) + number (1,0) - 2

[3 marks]

[3 markah]

CLO2
C3

- d) Below (Figure B7) is a program to create an Exam class.

Di bawah (Rajah B7) 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
```

Figure B7 / Rajah B7

- (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.

[3 marks]

[3 markah]

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

Lakarkan hasil keluaran berdasarkan pengaturcaraan dalam d(i).

[3 marks]

[3 markah]

QUESTION 4/ SOALAN 4CLO2
C1

- a) In ADO .NET, data access depends on two components. Name of these two components and explain in brief.

Dalam ADO .NET, capaian data bergantung kepada dua komponen. Namakan kedua-dua komponen tersebut dan terangkan secara ringkas.

[3 Marks]

[3Markah]

CLO2
C2

- b) The following namespaces are required to enable the use of databases in windows application. Explain the use of the namespaces.

Berikut adalah namespaces yang diperlukan untuk membolehkan penggunaan pangkalan data dalam tetingkap aplikasi. Terangkan kegunaan namespaces tersebut.

- i. System.Data.OleDb

[1.5 Marks]

[1.5Markah]

- ii. System.Data.SqlClient

[1.5 Marks]

[1.5Markah]

CLO2
C3

- c) The tblMagazine table contains three fields. The Cost field is numeric while the Code and MagName are text.

Satu jadual bernama 'tblMagazine' mengandungi tiga medan. Medan 'Cost' adalah berjenis numeric manakala medan 'Code' dan 'MagName' berjenis teks.

- i. Write a SQL SELECT statement that arranges the records in descending order by the Cost field.

Tuliskan penyataan SQL SELECT yang membolehkan rekod disusun secara menurun oleh medan Cost.

[1.5 Marks]

[1.5Markah]

- ii. Write a SQL SELECT statement that selects only the MagName and Cost field from the records which have a code of 'PG10'.

Tuliskan pernyataan SQL SELECT yang memilih hanya median MagName dan Cost daripada rekod yang mempunyai kod 'PG10'.

[1.5 Marks]

[1.5 Markah]

CLO2
C3

- d) i. Given :

Diberi :

`strFullName="Anas Amiruddin"`

Write a visual basic code segment using string method to get the output as below:

Tulis segmen kod visual basic dengan menggunakan kaedah rentetan untuk mendapatkan output seperti di bawah:

- a) `strFirstName="Anas"`

[1.5 Marks]

[1.5 Markah]

- b) `strLastName="Amiruddin"`

[1.5 Marks]

[1.5 Markah]

ii. Given the connection to a database as below (Figure B8):

Diberi adalah koneksi pangkalan data seperti di bawah (Rajah B8):

```
Public Sub ConnDb()
    With conn
        If .State = ConnectionState.Open Then FileClose()
        .ConnectionString = "Provider=Microsoft.ACE.OLEDB.12.0;Data Source =" &
            Application.StartupPath & "\..\..\KursusDIPDNS.accdb;" &
            ".Open()"
        MsgBox("Connection Opened Successfully", vbOKOnly, "JTMK COURSE")
    End With

    MessageBox.Show("Unable to connect", "error", MessageBoxButtons.OK, MessageBoxIcon.Error)
    Application.Exit()
End Sub
```

Figure B8 / Rajah B8

Rewrite the code (Figure B8) above and implement exception handling to handle the error occurs in the program.

Tulis semula kod aturcara di atas (Rajah B8) dan masukkan 'exception handling' untuk mengawal kesalahan sekiranya terjadi di dalam program.

[3 Marks]

[3 Markah]

SOALAN TAMAT

