Q1) Write the Visual Basic code for the following operation in one statement:

1. Make the height of Command1 equal half of Form1 height.
2. Paint the Form1 by the same color of Command1.
3. Make text font of Text1 same as font of Command1.
4. \[ y = \begin{cases} 
    x^2 & \text{if } x = 1 \\
    x + 5 & \text{if } x = 2 \\
    60 & \text{if } x = 3 
\end{cases} \]
5. Display the length of the one dimension array (A) on Text1 if option base is 0.

Q2) For the following project:

a) What is the content of all Texts after click the Exchange Command?
b) Draw the Flowchart for Exchange Command.

```
Private Sub Command1_Click()
    x = Text1.Text
    y = Text2.Text
    Text1.Text = Text3.Text
    Text2.Text = x
    Text3.Text = y
End Sub

Private Sub Form_Load()
    Text1.Text = "Electrical"
    Text2.Text = "Electronic"
    Text3.Text = "Communication"
    Command1.Caption = "Exchange"
End Sub
```
Q3) Design a project to calculate the value of \( y \) and print it.

\[
y = 1 - \frac{1}{x} + \frac{2}{x^2} - \frac{6}{x^3} + \frac{24}{x^4} - \frac{120}{x^5} \ldots \frac{n!}{x^n}
\]

Q4) Write the visual basic code to print the average of the one dimension array \( A(n) \) elements that divided by \( y \) without a reminder.

Q5) Write the visual basic code to create array \( d(n) \) from the tow arrays \( a(n) \) and \( b(n) \) according to the following equation: (use \textit{Subroutine})

\[
d = \begin{cases} 
\sqrt{a^2 + b^2} & \text{if } a \geq b \\
\sqrt{a + \sqrt{b}} & \text{if } a < b 
\end{cases} \quad \text{for each element}
\]
Q1)
1. Command1.Height = ScaleHeight / 2
3. Text1.FontName = Command1.Font
4. y = Choose(x, x ^ 2, x - 5, 60)
5. Text1.Text = UBound(A) + 1

Q2)
Private Sub Command1_Click()
    n = InputBox("input value of n")
    x = Val(Text1.Text)
    y = 0
    For i = 1 To n
        k = 1
        If i = 0 Then GoTo z
        For j = 1 To i
            k = k * j
        Next j
        z: y = (y + k / x ^ i) * (-1) ^ i
    Next i
    Print "y=": y
End Sub

Private Sub Form_Load()
    Text1.Text ="
    Command1.Caption = "Calculate"
End Sub

Option Base 1
Private Sub Command1_Click()
    Dim A() As Integer
    n = InputBox("input the length of array")
    y = InputBox("input the value of y")
    Sum = 0
    Count1 = 0
    ReDim A(n) As Integer
    For i = 1 To n
        A(i) = InputBox("input the array element")
    Next i
    For i = 1 To n
        If A(i) Mod y = 0 Then
            Sum = Sum + A(i)
            Count1 = Count1 + 1
        End If
    Next i
    average = Sum / Count1
    Print average
End Sub
Q5)

Option Base 1
Private Sub s(x, y, z)
If x >= y Then
    z = Sqr(x ^ 2 + y ^ 2)
Else
    z = x + Sqr(y)
End If
End Sub

Private Sub Command1_Click()
    Dim a(), b(), d()
    n = InputBox("input the length of array")
    ReDim a(n), b(n), d(n)
    For i = 1 To n
        a(i) = InputBox("input the array (a) element")
    Next i
    For i = 1 To n
        b(i) = InputBox("input the array (b) element")
    Next i
    For i = 1 To n
        Call s(a(i), b(i), d(i))
    Next i
    For i = 1 To n
        Print d(i); " ";
    Next i
End Sub