



Subject: Computer Programming
Division: all Divisions
Examiner: Committee

Year: 2nd
Time: 3 Hours
Date: 11 / 6 / 2014

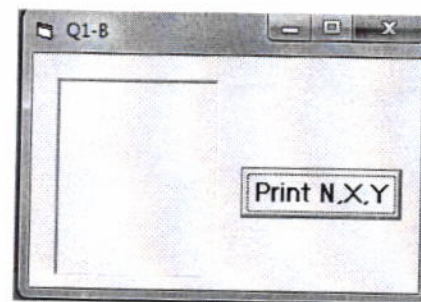
Answer FOUR Questions Only

- Q1: A-** Design a form with one command and four text boxes. Write a visual basic program to enter the values of (a, b and c) in to three text boxes. Calculate the value of (Y) from the following equation. Show a message box if divided by zero and show another message box if value of (c-2) is negative. Display the result (Y) in to text box. (13 Marks)

$$Y = \frac{3a^2 - b}{\sqrt{c-2}}$$

- B-** What is the result that is generated by each step of the following Visual Basic Program Segments. (12 Marks)

```
Private Sub Command1_Click()
Dim N, X, Y As Integer
N = 50
Do
X = Int (N / 2)
Y = N Mod 2
If N <= 3 Then Exit Do
Picture1.Print N, X, Y
N = X
Loop Until X = 0
End Sub
```



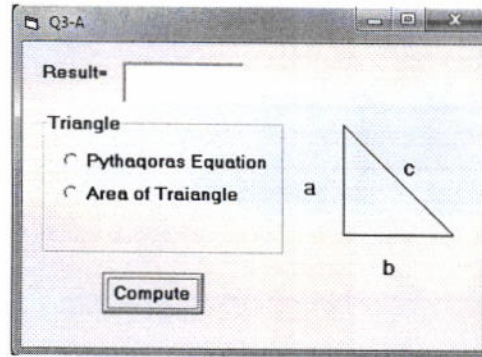
- Q2:** Design a form with one listbox, one command, and one picture box. Write a visual basic code to enter the value of (M) in to inputbox and add a sequence of real numbers (X_i), [where $i = 1, 2, \dots, M$] in to a list box. Calculate the mean and the standard deviation of the numbers and print them in to Picture Box. The mean and standard deviation are defined as:

$$\bar{X} = \frac{\sum_{i=1}^M X_i}{M}$$

The standard deviation is

$$\sigma = \sqrt{\frac{\sum_{i=1}^M (X_i - \bar{X})^2}{M}}$$

Q3: A- The following Project contains one command (Compute), one text box and two option buttons: option1 is (Pythagoras Equation) and option 2 is (Area of Triangle), Write a visual basic program such that when click on option1, the values of first and second sides of triangle (a & b) is entered by using inputbox statement and the third side (c) of triangle will be compute with Pythagoras equation. When click on option2 the values of height and base (a & b) is entered and the area of triangle will be compute. Display the results in to text box. (13 Marks)



B-Write a visual basic program for read the value (X) then compute the value of series (S) from the following equation. Design a suitable form using suitable input and output methods. (12 Marks)

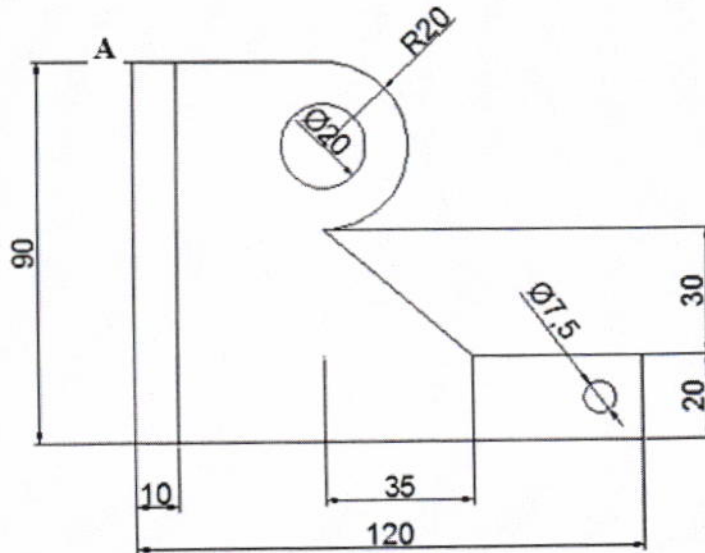
$$S = \frac{X}{X^2 + 1} - \frac{X}{X^2 + 2} + \frac{X}{X^2 + 3} - \dots \dots \dots \frac{X}{X^2 + 10}$$

Q4: Write a code program to read the values of a two dimension [D (N,8)] and one dimension array [U(8)]. Calculate the Summation (Sum) of a one dimension array (U). Compute a new array (Total) and array (Average) from the following equations. Display the array (Average) into a picture box.

$$[Total] = [D] * [U]$$

$$[Average] = \frac{1}{SUM} [Total]$$

Q5: A- Write a code program to draw the figure as shown below. Start from point A (10 , 10). Use scale (-10 , 0) - (110,160) (15 Marks)



B- The following statements represent of Visual Basic program that are used to generate the graph. Draw the figure and write all the necessary coordinates position into the graph. (10 Marks)

Private Sub Command1_Click()

```
Scale ( 0 , - 120 ) - ( 120 , 0 )
Line ( 10 , - 110 ) - ( 110 , - 90 ) , , B
Line ( 60 , - 90 ) - ( 110 , - 80 ) , , B
Line ( 60 , - 55 ) - ( 35 , - 90 )
Line ( 10 , - 90 ) - ( 65 , - 40 )
Circle ( 85 , - 55 ) , 25
Circle ( 85 , - 55 ) , 15
DrawWidth = 10
PSet (85 , - 55)
End Sub
```


الحلول النموذية لأسئلة البرمجة بلغة فيجوال بيسك – المرحلة الثانية ج كافة الفروع
العام الدراسي 2013-2014 – الدور الاول

Q1: A-

```
Private sub command1_click()
    Dim a, b, c, y
    A=val (text1.text)
    b=val (text2.text)
    c=val (text3.text)
    if c - 2 = 0 then
        msgbox "divided by zero", vbok
    Exit Sub
    ElseIf c-2 < 0 then
        msgbox"Negative Value",vbok
    exit sub
    else
        Y= (3*a^2-b) / SQR ( c-2)
    Endif
    Text4.text=str(y)
End sub
```

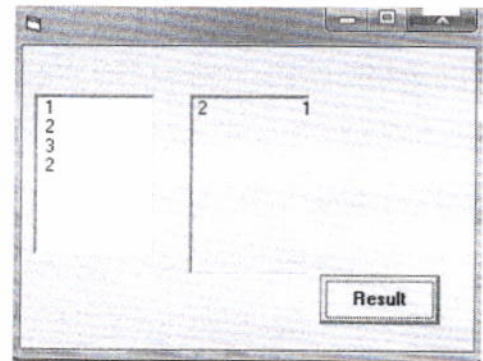
Q1:B-

N	X=int(n/2)	Y=n mod 2	If N<=3	?N,X,Y	N=x
50	50/2=25	50 mod 2=0	no	50,25,0	25
25	25/2=12	25 mod 2=1	no	25,12,1	12
12	12/2=6	12 mod 2=0	no	12,6,0	6
6	6/2=3	6 mod2=0	no	6,3,0	3
3	3/2=1	3 mod2=1	yes	-----	-----

Q2:

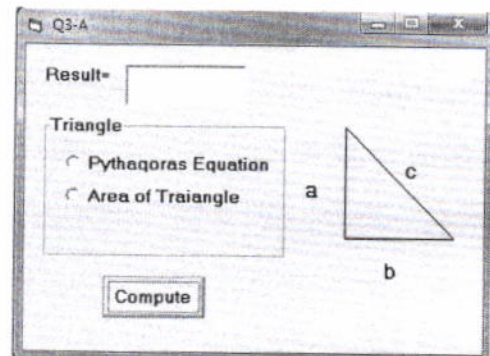
```
Private Sub Form_Load()
Dim m, x, i
m = Val(InputBox(""))
For i = 1 To m
List1.AddItem InputBox("x=")
Next
End Sub

Private Sub Command1_Click()
Dim i, sum, mean, s, m
m = List1.ListCount 'or m=val(inputbox(""))
For i = 0 To m - 1
sum = sum + Val(List1.List ( I ))
Next i
mean = sum / m
sum = 0#
For i = 0 To m - 1
sum = sum + (Val (List1.List( i - 1 ) ) - mean ) ^ 2
Next i
s = Sqr(sum / m)
Picture1.Print mean, s
End Sub
```



Q3: A-

```
Private sub command1_click()
Dim a,b,c,area
If option1.value =true then
A=val(inputbox("a="))
B=val(inputbox("b="))
C=sqr (A^2+B^2)
Text1.text=str( C )
ElseIf option2.value=true then 'or else
A=val(inputbox("a="))
B=val(inputbox("b="))
Area=0.5*a*b
Text1.text=str( area )
EndIf : End sub
```



Q3:B-

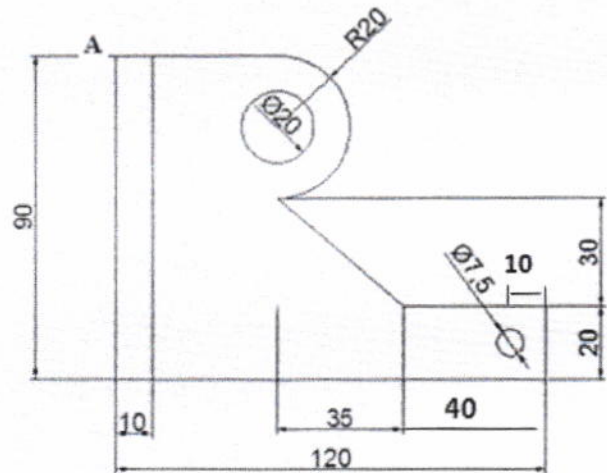
```
Private Sub Command1_click()  
Dim X,S,I, k  
X=val (text1.text)      'or x= val(inputbox(""))  
K=1  
For i=1 to 10  
S = S + X / (X^2 + I)*K  
K=-K  
Next I  
Text2.text =str(S)  
End Sub
```

Q4:

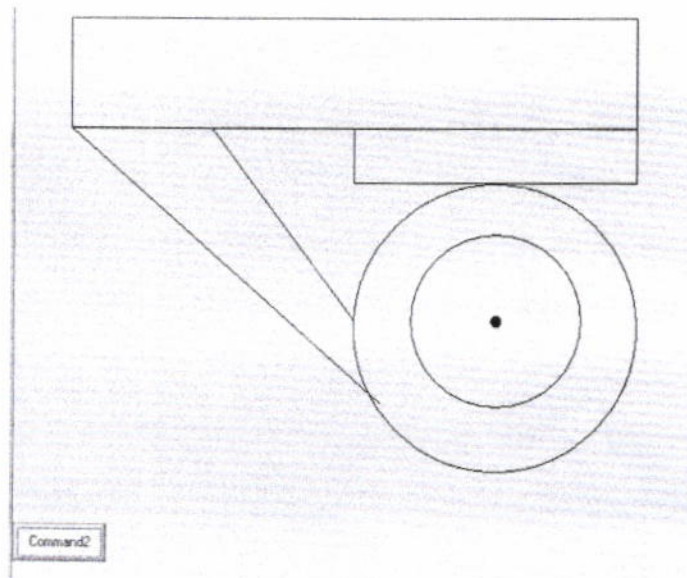
```
Private Sub Command1_click()  
Dim N, I, j, sum  
N=val(inputbox ("N="))  
ReDim D(N,8), U(8), Total(N), Average (N)  
For I=1 to N  
For J=1 to 8  
D(I,j)=Val(inputbox(""))  
Next j, i  
For i=1 to 8  
U(i) =val(inputbox(""))  
Sum=Sum+u(I)  
Next I  
For I=1 to N  
For J=1 To 8  
Total(I)=Total(I)+ D(I, J)* U(j)  
Next J, I  
For i=1 to N  
Average(I)= 1/Sum * Total(I)  
Next i  
For i=1 to N  
Picture1.print Average (i)  
Next I  
End Sub
```

Q5: A-

```
Private Sub Command1_Click()
Scale (-10, 0)-(160, 110)
Line (10, 10)-(20, 100), , B
Line (20, 100)-(130, 100)
Line (130, 100)-(130, 80)
Line (130, 80)-(90, 80)
Line (90, 80)-(55, 50)
Circle (55, 30), 20, , 3 / 2 * 3.14, 3.14 / 2
Circle (55, 30), 10
Circle (120, 90), 3.75
Line (55, 10)-(20, 10)
End Sub
```



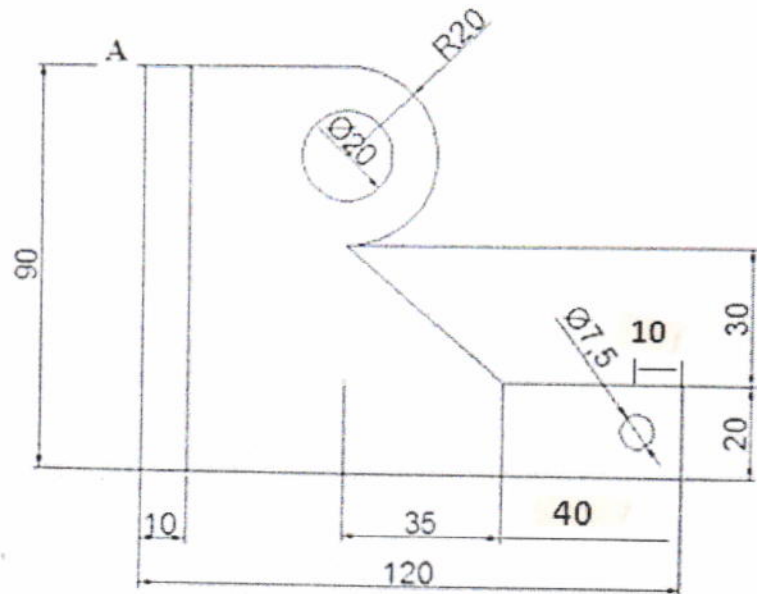
Q5: B-



Q5: A- Write a code program to draw the figure as shown below. Start from point A (10 , 10). Use scale $\frac{(-10 , 0) - (110,160)}{15}$ (15 Marks)

(15 Marks)

ملاحظة اضافة الابعاد على الرسم الرقم (40) و
الرقم (10)



Private Sub Command1_Click()