

SOLUTIONS TO EXAM B

1) i) (7 points)

$$= \text{IF}(\text{AND}(x \geq 0, x \leq 2), \cos(x), \text{IF}(x > 2, \cos(x^2/2), 1)).$$

$$f(0) = \cos(0) = 1, \quad f(3) = \cos(9)/2 = -0,2108\dots$$

ii) (7 points)

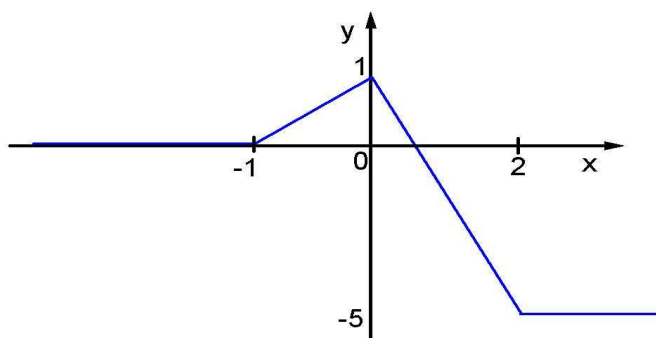
```

Function g(x)
Select case x
Case 0 to 2: g=cos(x)
Case Is > 2: g = cos(x^2/2)
Case Else: g = 1
End Select
End If
End Function
    
```

$$g(-1) = 1, \quad g(9) = -0,942519\dots$$

iii) (11 points)

$$f(x) = \begin{cases} 0, & \text{for } x < -1 \\ x+1, & \text{for } -1 \leq x < 0 \\ 1-3x, & \text{for } 0 \leq x < 2 \\ -5, & \text{for } x \geq 2 \end{cases}$$



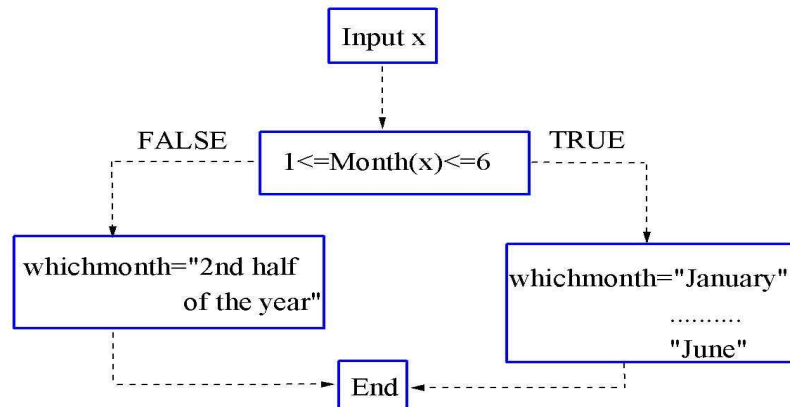
2)

= VLOOKUP(2, A1:D4, 3)	→	7
= VLOOKUP(3.8, A1:D4, 3)	→	8
= VLOOKUP(20, C1:D4, 2)	→	Tuesday
= HLOOKUP(3.8, A1:D4, 4)	→	5
= HLOOKUP(9, A2:D4, 3)	→	91
= HLOOKUP(9, A1:D3, 3)	→	50
= VLOOKUP(7, C1:D4, 2)	→	Monday
= VLOOKUP(8, B1:D4, 2)	→	7
= VLOOKUP(8.2, C1:D4, 2)	→	Tuesday
= HLOOKUP(3, A1:D4, 2)	→	3
= HLOOKUP(4, A2:D4, 3)	→	5
= HLOOKUP(8, A3:D4, 2)	→	5
= VLOOKUP(2, A1:D4, 4, FALSE)	→	Monday
= VLOOKUP(9, B1:D3, 2, FALSE)	→	8
= VLOOKUP(9, B2:D3, 2, FALSE)	→	8
= HLOOKUP("Monday", B1:D4, 4, FALSE)	→	Friday
= HLOOKUP(3, A2:D4, 3, FALSE)	→	5
= HLOOKUP(9, A2:D3, 2, FALSE)	→	43

3)

```
Function whichmonth(x As Date) As String
y = Month(x)
If y = 1 Then
whichmonth = "January"
ElseIf y = 2 Then
whichmonth = "February"
ElseIf y = 3 Then
whichmonth = "March"
ElseIf y = 4 Then
whichmonth = "April"
ElseIf y = 5 Then
whichmonth = "May"
ElseIf y = 6 Then
whichmonth = "June"
Else
whichmonth = "the date falls on the second half of the year"
End If
End Function
```

whichday(02/02/1966) = "February"



4)

```

Function numhour(x As String) As Single
numhour = (Application.WorksheetFunction.VLookup(x, [e1:h6], 2)
+ Application.WorksheetFunction.VLookup(x, [e1:h6], 3)
+ Application.WorksheetFunction.VLookup(x, [e1:h6], 4)) / 3
End Function
  
```

```

Function work(x As String) As String
y = numhour(x)
Select Case y
Case Is < 40: work = "not enough work"
Case 40 To 44: work = "decent performance"
Case Else: work = "to be recommended for promotion"
End Select
End Function
  
```

numhour("Lu") = 43,66667,

work ("Lu") = "decent performance"

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