

# 國立嘉義大學九十三年學年度 資訊管理學系碩士班招生考試試題

## 科目：計算機概論

1. Illustrate, with the help of a framework, the functions and relationships between the following items: **Arithmetic Logic Unit, Memory Unit, Machine Cycle, Bus, Register, Decoder, Operand, Operation Code.** (25 %)
2. Describe the processes of a email transmitted in a network using the TCP/IP protocol. (25 %)
3. Short answer : (20%)
  - (1) Convert  $(-16)_{10}$  to its equivalent two's complement form using the pattern of eight bits.
  - (2) Convert the 5-bit two's complement representation 11010 to its equivalent decimal number.
  - (3) Comment on the problem of coding an integer in one's complement notation by comparison with coding in two's complement notation.
  - (4) Suppose that a machine programmed with an insertion sort algorithm requires an average of 1 second to sort a list of 100 names. How long do you estimate that it takes to sort a list of 1000 names?
4. 依圖 1 程式內容回答下列問題： (30%)
  - (1) 本程式之功能為何？
  - (2) 以本程式為例，舉出下述各程式組成項目：(項目數依各小題規定)
    - .function (3 項)
    - .variable (3 項)
    - .object (1 項)
    - .method (1 項)
    - .property (1 項)

```
Private Sub Form Activate()  
    income = inputbox("輸入本年度綜合所得淨額","綜合所得稅")  
    FontSize = 20  
    print "92 年綜合所得稅"  
    FontSize = 14  
    Select Case income  
        Case Is <= 350000  
            tax_rate = 0.06  
            discount = 0  
        Case 350001 To 990000  
            tax_rate = 0.13  
            discount = 25900  
        Case 990001 To 1990000  
            tax_rate = 0.21  
            discount = 105100  
        Case 1990001 To 3700000  
            tax_rate = 0.3/  
            discount = 283300  
        Case Is >= 3700001  
            tax_rate = 0.4  
            discount = 655300  
    End Select  
    tax = income * tax_rate  
    Print "綜合所得淨額 : "; Tab(20); Format(income,"###") & "元"  
    Print "稅      率 : "; Tab(20); Format(tax_rate, "0%")  
    Print "稅      金 : "; Tab(20); Format(tax,"###0") & "元"  
    Print "累進差額 : "; Tab(20); Format(dicount, "###0") & "元"  
    Print "-----"  
    year_tax = tax - discount  
    Print "全年應納稅額: "; Tab(20); Format(year_tax, "###0") & "元"  
End Sub
```

圖 1.