NTIT 國立台中技術學院
九十六學年度研究所碩士班入學考試試題

所別：多媒體設計系碩士班 准考證號碼：
科目：計算機概論(科技組) 考生姓名：

注意事項：

1.本科目考試時間共 90 分鐘。
2.於答案卷書寫題號依序作答，不必抄題。
3.試卷不可書寫任何辨別個人姓名或特殊標記，違反者以零分計算。
4.請於試題簽名並填寫准考證號碼，繳卷時「試題」、「答案卷」一併繳回。

一、選擇題(15%)

1. An application that provides the user with pictures and menus from which to select commands and data is said to have a(n) _____.
   a. GUI b. Command-line Interface c. IDE d. Graphic screen

2.. A macro is a _____.
   a. document that contains the formatting necessary for a specific document type
   b. sequence of keystrokes and instructions that a user records and saves
   c. small image on the screen that represents a program or document
   d. collection of drawings, diagrams, and photographs that can be inserted into a document

3. _____ is a computer phrase that points out the accuracy of a computer output depends on the accuracy of its input.
   a. Nothing ventured, nothing gained (NVNG)
   b. Bad data, bad info (BDBI)
   c. Garbage in, garbage out (GIGO)
   d. What you see is what you get (WYSIWYG)

4. One purpose of using test data is to try to cause a _____, which is an error that occurs while a program is running.
   a. one-time error b. syntax error c. run-time error d. logic error

5. _____ is copyrighted software that is distributed at no cost for a trial period.
   a. Public-domain software b. Packaged software c. Custom software d. Shareware

二、問答題(85%)

1. 解釋下列專有名詞: (15%)
   (1). Wiki (2). GPS (3). XML (4). Radio frequency identification, RFID (5). MPEG
2. 簡述物件導向程式設計所具有的三項主要特性: (1). Encapsulation (2). Inheritance (3). Polymorphism (10%)
3. 簡述下列網頁設計軟體之主要功能及特色: Dreamweaver、Flash、FrontPage。 (15%)
4. 有關多媒體如何有效應用於 3G 行動網路服務中? 試提出你的具體想法。(10%)
5. 一函數 RSum(n)之定義如下: (15%)
   RSum(n)=1×2 + 2×3 + 3×4 + …+(n-1) × n, n 爲大於零之整數.
   請以遞迴函數方法實作 RSum(n)。

```
//設計參考
int RSum(int n){
    if(          )
      return _____;
  else
    return _____;
}
```

6. (a)完成下列選擇排序(selection sort)函數之程式碼。(10%)
(b)當執行完 selection_sort()後，變數 Scount 的值爲何(使用 n 表示之)，試分析之？(10%)

```
// 選擇排序法對整數陣列 data 的資料做排序，n 爲 data 之元素個數
void selection_sort(int *data, int n)
{
   int i, j, min_pos; //min_pos 記錄最小值的位置
   int Scount=0;
   for(i = 0; i < n - 1; i++){
      min_pos=i;
      for(j = i; j < n - 1; j++){

         if( _____ < data[min_pos])

            min_pos = _____;
         Scount++;
      }
      swap(data[i], data[min_pos]);
   }
   //(b)此時 Scount 之值爲何?
}

void swap(int &a, int &b)
{
   a = a + b;
   b = a - b;
   a = a - b;
}
```