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. Dead code is _____.
   a. the program instructions that will be converted to machine language
   b. any program instructions that a program executes
   c. the program instructions that have been converted to machine language
   d. any program instructions that a program never executes

2. _____ is ideal for the production of high-quality color documents such as textbooks, corporate newsletters, marketing literature, product catalogs, and annual reports.
   a. Desk Top Publishing software　b. CAD software　c. Word processing software　d. Multimedia authoring software

3. In object-oriented design, the concept of packaging data and procedures into a single object is called _____.
   a. validation　　b. encapsulation　　　c. verification　　d. consolidation

4. _____ is a set of technologies by Sun Microsystems that allows programmers to develop and deploy Web services for an enterprise.
   a. JIT (Java Instruction Technology)　　c. J2EE (Java 2 Platform Enterprise Edition)
   b. JavaScript　　　　　　　　　　　　d. JavaBuilder

5. _____ is the delivery of education at one location while the learning takes place at other locations.
   a. Extended training (ET)　b. Faraway schooling (FS)　c. Remote teaching (RT) d. Distance learning (DL)

二、簡答題(35%)

1. 解釋下列專有名詞: (15%) (1). J2ME　(2).USB 2.0　(3). JPEG 2000　　(4). Virtual Reality　(5). Embedded OS

2. 將十進位值 6230 換算成十六進位及二進位。(5%)

3. 簡述下列應用軟體之主要功能及特色: Photoshop、Dreamweaver、Flash、Maya、Excel。(15%)

三、問答題(50%)

1. 試舉例說明二元樹結構(Binary Tree Structure)及佇列(Queue)在日常生活中的應用範例。(10%)

2. 參考下列 Fib(int n)函式的定義。(20%)
   (a) 請問Fib(8)的回傳值為何?
   (b) 請使用疊代(iteration)的方式重新設計Fib()函式。

```
int Fib(int n) {
    if (n <= 0) return 0;
    if (n == 1) return 1;
    return Fib(n-1)+Fib(n-2);
}
```

Fib()函式疊代法架構如下(僅供參考):
```
int Fib(int n) {
    int i, f1=0, f2=1, f3;
    for(i=_____; _____; _____) {


    }
    return ____;
}
```

3. 有一 8 列(Row)×11 行(Column)之二維陣列(2-D Array)，假設以列為主(Row major order)排列記憶體位址，且每一陣列元素(entry)佔兩個記憶體單位(two memory cells)。
   請問: (a)若 Array[0][3]之記憶體位址為 5678，則 Array[3][6]之記憶體位址為何? (5%)
   　　　(b)若改以行為主(Column major order)，則 Array[3][6]之記憶體位址為何? (5%) 註: 須詳寫計算過程。

4. 詳述二元搜尋演算法(Binary Search Algorithm)之作法及其設計精神。(10%)