※ 注意：請於試卷上「非選擇題作答區」依序作答，並應註明作答之題號。

1. (15%) What is the output of the following C++ code?

```cpp
#include <iostream.h>
void swap1(int, int);
void swap2(int *v1, int *v2);
void swap3(int&, int&);
int main(){
        int i = 8;
        int j = -4;
        swap1(i,j);
        cout << "i = "<< i << endl
            << "j = "<< j << endl;
        swap2(&i,&j);
        cout << "i = "<< i << endl
            << "j = "<< j << endl;
        swap3(i,j);
        cout << "i = "<< i << endl
            << "j = "<< j << endl;
        return 0;
}

void swap1(int v1, int v2){
    int tmp = v2;
    v2 = v1;
    v1 = tmp;
}

void swap2(int *v1, int *v2){
    int tmp = *v2;
    *v2 = *v1;
    *v1 = tmp;
}

void swap3(int &v1, int &v2){
    int tmp = v2;
    v2 = v1;
    v1 = tmp;
}
```

2. (5%) If the memory cell whose address is 3 contains the value 8, what is the value

of cell number 7 after the following operations?
Case 1: writing the value 5 into cell number 7
Case 2: moving the contents of cell number 3 into cell number 7

3. (10%) If John would like to read a file (from the CD-ROM), which is his 1500-page novel with 3000 characters in each page, by using a 24x CD-ROM drives, how long does it take to finish the file reading?

4. (10%) Please explain how the CPU executes an instruction.

5. (10%) The algorithm is designed to print the beginning of what is known as the Fibonacci sequence. Please answer the following questions:
   甲、 Identify the body of the loop
   乙、 Where is the initialization step for the loop control
   丙、 The modification step
   丁、 The test step
   戊、 What list of numbers is printed

   1. Last = 0;
   2. Cur = 1;
   3. While (Cur < 20) do {
   4.   Print the value assigned to Cur;
   5.   Temp = Last;
   6.   Last = Cur;
   7. Cur = Last + Temp;}

6. (10%) Please write down the following devices according to the speed of their access time (from slow to fast)：
   ROM (read-only memory), Tape drives, DRAM, Hard disk drives, CD-ROM drives, SRAM

(2% for each of the following questions)
Match each item with the correct statement below.

| a. | Writing | c. | Initializing |
| b. | Reading | d. | Polarized |

_____ 7 The recording of data on a disk or tape

_____ 8. The retrieval of data from a disk or tape

_____ 9. The process of mapping a disk

_____ 10. Magnetic bar with ends having opposite magnetic polarity

Match each item with the correct statement below.

a. V.92   c. HDSL
b. Kermit   d. 56K

_____ 11. New data communications standard

_____ 12. Fastest data transmission speed available for PCs on a standard phone line

_____ 13. Common file transfer protocol for modems

_____ 14. Type of digital subscriber line service

Match each item with the correct statement below.

a. HTML template   c. XML
b. Style sheet   d. Microsoft Script Editor

_____ 15. Provides pre-designed navigation tools

_____ 16. Provides document style information

_____ 17. Application Word uses to create Web pages

_____ 18. Extensible Markup Language

Match each item with the correct statement below.

a. Range   c. Goal seeking
b. Cell reference   d. Chart

_____ 19. Can consist of a group of cells in a column or a row

_____ 20. Data-analysis technique that calculates the values that will lead to a desired outcome

_____ 21. Makes data easier to understand

_____ 22. Tells the formula to look up the contents of the referenced cell

Match each item with the correct statement below.

a. Sequential file database   c. Relational database
b. Row   d. Query

_____ 23. Can form relationships among different tables

_____ 24. Also referred to as a flat-file database

_____ 25. A user-constructed special request

_____ 26. Can also be called a record