台灣聯合大學系統九十二學年度轉學生入學試題卷

類組：A-4　　年級：2 節次：2 科目：計算機概論　　共 3 頁 第 1 頁

一、(36%) 單選題，每題三分，**答錯倒扣兩分**

1. How does the math coprocessor outperform the ALU?
a. Manipulates more numbers per millisecond
b. Utilizes floating-point arithmetic
c. Bypasses RAM
d. Eliminates text processing
e. None of the above

2. What is the term for the memory chips that are similar to random access memory, but that run much faster?
a. ROM
b. Cache
c. RAM
d. Disk
e. Coprocessor

3. During execution of a program, both the program and the data it is analyzing are held in which portion of the computer?
a. ROM
b. RAM
c. Control unit
d. Arithmetic logic unit
e. Register

4. A computer's initial start-up instructions are in which portion of the computer?
a. RAM
b. Control unit
c. Disk storage
d. ROM
e. None of the above

5. What is the name of the signal that the keyboard sends to the computer when a key is pressed?
a. Key code
b. Keyboard controller
c. Interrupt request
d. Numeric signal
e. None of the above

6. What does an expansion slot do?
a. Gives built-in devices access to the computer's bus via controller cards
b. Provides I/O ports for external devices
c. Reports the amount of memory available
d. Shows the number of registers present
e. All of the above

7. A disk controller
a. Controls hard disk drives and floppy disk drives
b. Acts as an interface between the disk and CPU
c. Is a factor in determining how quickly a drive can read and write data
d. All of the above
e. Both a and b

注意：背面有試題

8. Which of the following components are commonly included in a logical format?

a. Boot record

b. File-allocation table

c. Root directory

d. Data area

e. All of the above

9. What is the purpose of the file-allocation table?

a. It determines whether the disk can run the operation system correctly

b. It creates a log that lists each file location and the status of each sector

c. It is a tool for organizing files on disk

d. It stores data and program files

e. All of the above

10. Distributed computing can be done on a LAN if the arrangement is

a. Client/server

b. Peer-to-peer

c. File server

d. Parallel to serial

e. Bus

11. Which network protocol is based on the star topology and uses coaxial cable or twisted-pair wire?

a. Modal Net

b. Ethernet

c. Token Ring

d. ARCnet

e. Fast Ethernet

12. The tendency to periodically check the OS to see whether other programs need the CPU is called

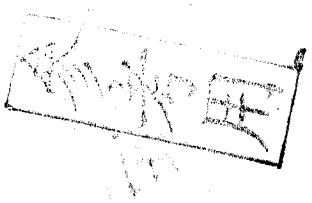
a. Multiprocessing

b. Pre-emptive multitasking

c. Graphical processing

d. Object processing

e. Cooperative multitasking



二、(14%) 請將下述程式之輸出結果寫出來，假設所鍵入之 unsigned integer 是 2127

```
#include <stdio.h>

unsigned reverseBits( unsigned );
void displayBits( unsigned );

int main()
{
   unsigned a;

   printf( "Enter an unsigned integer: " );
   scanf( "%u", &a );
   printf( "\nBefore bits are reversed:\n" );
   displayBits( a );
   a = reverseBits( a );
   printf( "\nAfter bits are reversed:\n" );
   displayBits( a );

   return 0;
}

unsigned reverseBits( unsigned value )
{
   unsigned mask = 1, temp = 0;
   int i;

   for ( i = 0; i <= 15; i++ ) {
      temp <<= 1;
      temp |= ( value & mask );
      value >>= 1;
   }

   return temp;
}

void displayBits( unsigned value )
{
   unsigned c, displayMask = 1 << 15;

   printf( "%7u = ", value );

   for ( c = 1; c <= 16; c++ ) {
      value & displayMask ? putchar( '1' ) : putchar( '0' );
      value <<= 1;

      if ( c % 8 == 0 )
         putchar( ' ' );
   }

   putchar( '\n' );
}
```

三、(10%) Describe how an array could be used to implement a queue in a high-level language.

四、(10%)Describe what is data mining and its applications.

五、(15%)What problem arises as the lengths of the time slices in a time-sharing system are made shorter and shorter? What about as they become longer and longer?

~~六、(15%)In what way could TCP be considered a better protocol for implementing the~~

改成：What is TCP and its applications?