

1. Single choice(單選題): (30%)

- (1) Arrange the units below in increasing order, from the smallest to the biggest. (A)bit MB KB GB byte (B) bit byte KB MB GB (C) bit byte MB GB KB (D) bit GB byte KB MB。
- (2) The clock cycle of Pentium 4 12 GHz is (A)  $5 \times 2^{-3}$  s (B) 0.05ns (C) 0.5ns(D) 50ps
- (3) Which is of the following is not the speed unit for computer terminology? (A)BPS (B) CPS (C) UPS (D) MIPS。
- (4) Which of the following definition is not included in 3C Industry? (A) Consumer Electronics (B) Computing (C) Computer (D) Communication
- (5) If one computer with 32-line address line and 8-line data line without external circuit, what's the largest memory addressing space of direct access? (A) 16MB (B) 256MB (C) 1GB (D) 4GB
- (6) Which of the following is RS232? (A) parallel ports (B) serial ports (C) IEEE488 interface (D) SCSI interface
- (7) Which of the following storage bit is used by SRAM? (A) flip-flop (B) capacitor (C) resistance (D) magnet
- (8) What kind of protocol should be used in the network settings if connecting to World Wide Web in Windows XP? (A)TCP/IP (B) PPP (C) NetBEUI (D) IPX/SPX
- (9) CSMA/CD (Carrier Sense, Multiple Access with Collision Detection) is used with which following protocol (A) star network (B) ring network (C) irregular network (D) bus network
- (10) Which of the following is not the type of computer network? (A) Local Area (B) Narrow Area Network (C) Wind Area Network (D) Internet
- (11) Which of the following is Network Operating System? (A) Linux (B) MS-DOS(C) Windows 98 (D) Windows ME。
- (12) By using which of the following can connect to IP network 192.168.1.0 and 192.168.2.0? (A) Hub (B) Bridge (C) Router (D) Repeater
- (13) Which of the following is legal IP, and it can set as a server? (A) 203.64.120.1 (B) 203.64.120.256 (C) 256.64.120.1 (D) 203.256.120.1。
- (14) Which of the following description for WWW is wrong? (A) It is the abbreviation for World Wide Web (B) The business can offer information, such as their products or services, to the public (C) The users won't restrict to relating laws of intellectual property while setting up Home Page (D) The information on WWW shows not only words and pictures but also sound and images
- (15) The electronic device in a computer for sending data is called (A) bus (B) modern (C) newsletter article (D) parallel ports

2. How long is a CUP with 5MIPS labeling going to take if it performs 100 million instructions? (5%)
3. If one computer with 1 MB the largest fixed address memory, then how many lines of its address bus should be? (5%)
4. Draw and explain the following topologies of Local Area Networks: Bus, Star and Ring. (10%)
5. Explain the following terms. (10%)
  - a. Accumulator
  - b. Dynamic Random Access Memory
  - c. Year 2038
  - d. SET
  - e. Power PC
6. Describe the different between LAN,MAN and WAN. (10%)
7. Describe the IDE, AGP, PCI-E and PCI interface. (10%)
8. What are the outputs of the following C and Visual Basic programs? (20%)
  - a. 

```
#include<stdio.h>
#define f(x)(2*x*x+3*x+9)
void main()
{
    int i;
    for (i=1; i<9; i+=2)
        printf("%d,%d \n", f(i),f(i+1));
}
```
  - b. 

```
#include<stdio.h>
void V(int *i, int *j)
{
    *i=*j+4;
    *j=*j-2;
    printf("%d %d \n", *i,*j);
}
void VV(int *a, int b)
{
    *a+=3;
    b*=2;
    printf("%d %d \n", *a,b);
    V(a, &b);
}
```

```
main()
{
    int x=5,y=8;
    VV(&x,y);
    printf("%d %d \n", x,y);
}
```

c. Private Sub Command1\_Click ( )

```
A=12; B=2; C=10
IF A>5 THEN
    IF B<3 THEN
        C=C+1
    ELSE
        C=C-2
    END IF
END IF
PRINT C
End Sub
```

d. Private Sub Form\_Activate ( )

```
Dim A(3,3) As Integer
For I = 0 To 3
    For J = 0 To 3
        A(I,J) = 2*I*(I+J)
    Next J
Next I
PRINT A(1,3)+A(2,0)
End Sub
```