

國立彰化師範大學 102 學年度碩士班招生考試試題

系所：資訊管理學系

科目：計算機概論

☆☆請在答案紙上作答☆☆

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一、單選題(40%，每題 4%)

- _____ provides technology that uses the public Internet backbone as a channel for private data communication
(A) ISDN (B) DSL (C) VPN (D) E-Commerce (E) All of the above
- If the memory address space is 2 TB and the word size is 64 bits, then _____ bits are needed to address each word.
(A) 36 (B) 38 (C) 32 (D) 34 (E) 30
- Which of the following number systems is erroneous?
(A) $(123)_{10}$ (B) $(80)_8$ (C) $(ABC)_{16}$ (D) $(10)_2$ (E) $(10)_8$
- The CPU performance of modern computers can be improved by using the _____ technique.
(A) e-mail (B) USB (C) pipelining (D) XML (E) SCSI
- The _____ of a magnetic disk defines the time to move the read/write head to the desire track.
(A) rotational speed (B) seek time (C) transfer time (D) sector (E) track
- _____, an intermediate language, is a form of instruction set designed for efficient execution by a software interpreter.
(A) Machine code (B) Script (C) Bytecode (D) Flash (E) None of the above
- The main disadvantages of a _____ topology are related to the amount of cabling and the number of I/O ports required.
(A) star (B) ring (C) mesh (D) bus (E) none of the above
- The _____ layer of the TCP/IP protocol suite provides service for end users.
(A) application (B) session (C) transport (D) data-link (E) physical
- _____ is a programming language specifically designed for AI.
(A) C++ (B) Java (C) C# (D) LISP (E) None of the above
- In _____ sort, the smallest number from the unsorted list is swapped with the number at the beginning of the unsorted list.
(A) heap (B) bubble (C) selection (D) insertion (E) radix

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二、填充題(30%，每題 5%)

1. RAM (in Computer) stands for _____ Access Memory.
2. ISP (in Network) stands for _____ Service Provider.
3. CGI (in Web Technology) stands for Common _____ Interface.
4. STL (in C++ language) stands for Standard _____ Library.
5. SIP (in Network) stands for _____ Initiation Protocol.
6. JSP (in Network) stands for _____ Server Pages.

三、問答題(30%)

1. The following recursive function is written in C++ language. What is the value of RECUR(30, 105)? Please show your work in detail. (10%)

```
int RECUR(int x, int y){
    while(x != y){
        if(x > y)
            return RECUR(x-y, y);
        else
            return RECUR(x, y-x);
    }
    return x;
}
```

2. A list contains the following elements. What is the list after 2 passes of the selection sort? (10%)
20, 12, 26, 36, 7, 10, 12
3. Show the hexadecimal result of the following operations. (10%)
(A) $(EC)_{16}$ AND $(12)_{16}$ (B) $(12)_{16}$ OR $[(23)_{16}$ XOR $(CE)_{16}]$