

國立嘉義大學九十六學年度  
資訊工程學系碩士班招生考試試題

科目：計算機概論

1. Consider the underline statements of the program segments. If there is not any error, then comment as "ok". If there is any error in them, state the errors and correct them. (15%)

```

01  int *zPtr;  /* zPtr will reference array z */
02  int *aPtr = NULL;
03  void *sPtr = NULL;
04  int number, i;
05  int z[5] = {1, 2, 3, 4, 5};
06  sPtr = z;
07  ++zptr;
08  /* use pointer to get first value of array */
09  number = zPtr;
10  /* assign array element 2 (the value 3) to number */
11  number = *zPtr[2];
12  /* print entire array z */
13  for ( i = 0; i <= 5; i++)
14      printf("%d ", zPtr[i]);
15  /* assign the value pointed to by sPtr to number */
16  number = *sPtr;
17  ++z;

```

2. Find the error(s) in each of the following and explain how to correct it (them): (15%)

(1) Assume the following prototype is declared in class Time:

```
void ~Time( int );
```

(2) The following is a partial definition of class Time.

```

class Time {
public:
// function prototypes
private:
    int hour = 0;
    int minute = 0;
    int second = 0;
};

```

(3) Assume the following prototype is declared in class Employee:

```
int Employee( const char *, const char * );
```

3. Describe the following terms: (18%)

- (1) Deadlock
- (2) RSVP (ReReservation Protocol)
- (3) DHCP (Dynamic Host Configuration Protocol)
- (4) VPN (Virtual Private Network)
- (5) RFID
- (6) Hashing

4. What advantages does a circuit-switched network have over a packet-switched network? (5%)

What advantages does TDM have over FDM in a circuit-switched network? (5%)

5. Give the 4 characters "code", The Ascii is "1100011", "1101111", "1100100", "1100101". Write the Hamming code. (10%)

6. Draw the binary tree based on the following preorder and postorder sequence. (10%)

Preorder : A B D F E G C

Postorder: F D G E B C A

7. The Following is an assembly program for some microprocessor, what is the AX by program run. (12%)

```

                .DATA
DATA1 DB      12H
DATA2 DB      08H
SUM   DB      ?
                .CODE
MAIN  PROC
        MOV    AL,DATA1
        MOV    BL,DATA2
        ADD   AL,BL
        MOV   SUM,AL
        CALL  DumpRegs
        EXIT
                MAIN  ENDP

```

8. Convert the decimal number 0.325 to binary.(Select seven digits ) (5%)

9. What is the execution result of the prefix expression  $+ - 2 * 34 + 4 / 82$  ? (5%)