

淡江大學 103 學年度進修學士班轉學生招生考試試題

系別：資訊工程學系三年級

科目：程式語言

12-1

考試日期：7月18日(星期五) 第4節

本試題共 6 大題，3 頁

1. Multiple choice questions with at least one correct answer or multiple response questions. (30%)

(a) In programming language C, which of the following variable names are correct?

(1) my_1st_book (2) my-1st-book (3) home@Taipei (4) _name (5) 1st_book

(b) The size of string "Hello World" in 32-bit system is

(1) 10 (2) 11 (3) 12 (4) 13 (5) 20

(c) The size of 12345 in 32-bit system is

(1) 2 (2) 3 (3) 4 (4) 5 (5) 6

(d) Which of the following escape characters are "end of string"?

(1) \n (2) \a (3) \0 (4) \e (5) NULL

(e) $x = 0; y = 0; \text{if}(x == 0) y = x + 10; y = ?$

(1) 10 (2) 20 (3) 30 (4) 40 (5) 0

(f) $x = 0; y = 0; \text{if}(x = 0) y = x + 10; y = ?$

(1) 10 (2) 20 (3) 30 (4) 40 (5) 0

(g) $x = 10; y = 0; \text{if}(x == 20) y = x + 10; y = ?$

(1) 10 (2) 20 (3) 30 (4) 40 (5) 0

(h) $x = 10; y = 0; \text{if}(x = 20) y = x + 10; y = ?$

(1) 10 (2) 20 (3) 30 (4) 40 (5) 0

(i) $x = 10; y = x++; y = ?$

(1) 9 (2) 10 (3) 11 (4) 12 (5) 13

(j) $x = 10; y = ++x; y = ?$

(1) 9 (2) 10 (3) 11 (4) 12 (5) 13

(k) $\text{if}(60 < (12 * 5)) \text{printf}(\text{"Hi"}); \text{printf}(\text{" Hello"});$ the output is

(1) Hi Hello (2) Hi (3) Hi (4) Hello (5) (no output)

Hello

(l) $\text{if}(5 < 3) \text{printf}(\text{"*"}); \text{else if}(7 == 8) \text{printf}(\text{"&"}); \text{else printf}(\text{"\$"});$ the output is

(1) * (2) & (3) \$ (4) *\$ (5) (no output)

(m) Which of the following are infinity loop?

(1) while(1) {} (2) while(x==1) {} (3) while(x = 1) {} (4) while(x) {} (5) while(-99) {}

(n) In programming language C, array index starting value is the number of

(1) 0 (2) 1 (3) -1 (4) 65535 (5) user-define

(o) How to copy the contents of a character array A to a character array B?

(1) B = A; (2) strcpy(B,A); (3) for(i=0;i<n;i++)B[i] = A[i]; (4) B[n] = A[n]; (5) copy(B,A);

2. To convert the following formulas to programming language C expressions. (15%)

(a) $(b^2 - 4ac) / 2a$ (b) $c \times 9 / 5 + 32$ (c) $(f - 32) \times 5 / 9$ (d) $w / (h / 10)^2$ (e) $s(s-a)(s-b)(s-c)$

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本試題雙面印刷

背面尚有試題

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3. Assuming enter numeric serial is

58 23 46 75 98 150 12 176 145 -99

What is the output of the following program? (10%)

```
#include <stdio.h>
int main() {
    int n;
    scanf("%d", &n);
```

```
while((n != -99) && (n%2 !=0)) {
    printf("%d\n", n%5);
    scanf("%d", &n);
}
return 0;
}
```

4. What is output by the following programs? If the answer is unknown, please write "N/A".(20%)

(a)

```
#include <stdio.h>
int main() {
    int x[6] = {10,20,30,40,50,60};
    int *p;
    p = x;
    for(int i=0;i<6;i++)
        printf("%d\n",*(p+i));
    return 0;
}
```

(b)

```
#include <stdio.h>
int main() {
    int x[6] = {10,20,30,40,50,60};
    int *p;
    p = &x[0];
    for(int i=0;i<6;i++)
        printf("%d\n",*p+i);
    return 0;
}
```

(c)

```
#include <stdio.h>
int main() {
    int x[6] = {10,20,30,40,50,60};
    int *p;
    p = x;
    for(int i=0;i<6;i++)
        printf("%d\n",p[i]);
    return 0;
}
```

(d)

```
#include <stdio.h>
int main() {
    int x[6] = {10,20,30,40,50,60};
    int *p;
    p = &x[3];
    for(int i=0;i<6;i++)
        printf("%d\n",p[i]);
    return 0;
}
```

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5. What are the outputs of the following program? (10%)

```
#include <stdio.h>
void A(int ); void B(int ); void C(int);
void A(int n){
    printf("A(): n = %d\n", n);
    if((n/100)>0) B(n/100);
    else C(n/100);
    printf("A():terminated\n");
}
void B(int n){
    printf("B(): n = %d\n", n);
    if(n>10) C(n/10);
    else A(n/10);
    printf("B():terminated\n");
}
```

```
void C(int n){
    printf("C(): n = %d\n", n);
    if(n>0) A(n);
    printf("C():terminated\n");
}
int main(){
    int p = 1000;
    A(p);
    printf("p = %d\n", p);
    return 0;
}
```

6. Print out the output of the following program. (15%)

```
#include <stdio.h>
int x = 1, y = 10, z = 100;
void F1();
void F2();
int main() {
    int y = 0;
    x = x + 100;
    y = y + 100;
    z = z + 100;

    F1();
    F2();

    printf("main():x = %d\n", x);
    printf("main():y = %d\n", y);
    printf("main():z = %d\n", z);
    return 0;
}
```

```
void F1() {
    int z = 0;
    x = x + 1;
    y = y + 1;
    z = z + 1;
    printf("F1():x = %d\n", x);
    printf("F1():y = %d\n", y);
    printf("F1():z = %d\n", z);
}
void F2() {
    int x = 0;
    x = x + 10;
    y = y + 10;
    z = z + 10;
    printf("F2():x = %d\n", x);
    printf("F2():y = %d\n", y);
    printf("F2():z = %d\n", z);
}
```