이름:
학번:

A. 다음 에러를 수정하는 방법을 적으세요.
(Python:)
1. >>> random.randint(1,10)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'random' is not defined

2. >>> print 'asdf'+"adsf"+3
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: cannot concatenate 'str' and 'int' objects
functionA();

3.
a.py
```
functionA();
def functionA() :
     print 'asdf'
```

$ python a.py
```
Traceback (most recent call last):
       File "a.py", line 1, in <module>
           functionA();
NameError: name 'functionA' is not defined
```

(C:)
4.
```
#include <stdio.h>

int main()
{
     char a[]='asdfasdf';
     printf("%s\n",a);
     return 0;
}
----------
c1.c:5:11: warning: character constant too long for its type.
```

B. (C:) 다음 프로그램의 실행결과를 예측하세요.

1.

```
#include <stdio.h>
int main()
{
     int NUMBER=1;
     printf("%d\n", NUMBER);
     printf("%d\n", NUMBER*2);
     return 0;
}
```

2.

```
#include <stdio.h>

#define NUMBER 324+2

int main()
{
     printf("%d\n", NUMBER);
     printf("%d\n", NUMBER*2);
     return 0;
}
```

C. (Python:)

1. Fill in the blanks with a proper data type among integer, floating point number, string.

1, 3, 5, 7, 9, 11	
1.0, 2.0, 3.0, 4.0	
"10", "20", "30", "40", "50"	
"7 apples, 14 oranges, 3 lemons"	
3.14, 6.05, 2.68	
125603806	
"O*&#wY%*&gfC%YO*&%3yc8r2"	

2. Fill in the blanks with a proper entire statement. (8)

A	B	A or B	A and B
True	True		
True	False		
False	True		
False	False		

3. Guess the results.

```
>>> int('42')
_____________________
>>> int(42)
_____________________
>>> int('hello')
_____________________
>>> int('two')
_____________________
>>> int(' 42 ')
_____________________
>>> 2 + int('2')
_____________________
>>> '2'  + '2'
_____________________
>>> 'Hello' == 'HELLO'
_____________________
 >>> not True
_____________________
 >>> False not
_____________________
```

4. Fill in the blank in the following source code.

```
*********************************
'Number of divisors'
*********************************
Input the first number :
10
Input the second number :
20
Number of divisors of first number is 4
Number of divisors of second number is 6
Result is : 10
```

Source code:

```
def problemDescription(num) :
     cnt=0
     for i in range(1,num+1) :
          if _____________:
               cnt=cnt+1
     return cnt

print '*********************************'
print '\'Number of divisors\''
print '*********************************'
print 'Input the first number : '
fnum = int(raw_input())
print 'Input the second number : '
snum = int(raw_input())

result1 = problemDescription(fnum)
print 'Number of divisors of first number is '+ str(result1)
result2 = problemDescription(snum)
print 'Number of divisors of second number is '+ str(result2)
print 'Result is : ' + str(result1+result2)
```

5.

1) Fill in the blank. (2)

```
>>> print _____________________________
He said, "I can't believe you let him borrow your car."
```

2) Fill in the blank. (2)

```
>>> spam = [2, 4, 6, 8, 10, 12, 14]
>>> ________________________
>>> spam
[2, 4, 8, 12, 14]
```

3) Guess the results. (6)

```
>>> animals = ['aardvark', 'anteater', 'antelope', 'albert']
>>> animals[0:0]

____________________
>>> animals[0:3]

____________________
>>> 'Hello world!'[3:8]

____________________
```

6. Guess the result.

```
def Incr(hgr) :
     i=0
     cnt=0

     while i!=hgr :
          print '*'*hgr
          cnt=hgr+cnt
          hgr=hgr-1
     return cnt
cnt=Incr(5)
print str(cnt)
```

7. Fill in the blanks. (10)

Result

```
162 793 414 896 460 272 255 761 804 316 207 182 223 263 302 818 767
761 134 376 526 720 499 425 632 104 501 694 794 139 87 597 186 520
202 417 433 444 677 531 24 407 653 921 663 608 176 227 932 595 655
703 839 49 420 509 587 818 606 104 161 672 226 982 229 521 30 854
382 429 894 152 536 459 888 161 40 660 400 812 297 774 5 547 727 381
6 811 94 339 902 65 89 511 595 392 551 944 26 625
Maximum number is 982
```

Source code:

```
import random

num=[]
for i in range(100) :
     n=int(random.randint(1,1000))
     num.append(n)

for i in num :
     print i,
print ''

compare = 0

for i in num :
     ________________
          ____________

print 'Maximum number is '+ str(compare)
```

8. Guess the result.

```
>>>a=[1, 3, 2]
>>>b=a
>>>d=b[:]
>>>b.sort()
>>>b

_________________
>>>a

_________________
>>>d

_________________
```

9. Guess the result

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
     int i, j;
     i=0; j=0;
     printf("%d\n", i++);
     printf("%d\n", ++i);
     printf("%d %d\n", i, j);
     printf("%d\n", ++j + i++);
     printf("%d %d\n", i, j);
}
```

Result:

C. (c 언어)

1. 변수 x, y가 integer type이라 가정하고 다음 빈 칸에 x와 y의 계산 결과 값을 적으시오.

x = (3 + 7) * 6;	x=
x = (12 + 6) / 2 * 3;	x=

x=(int)((3.4+7.4)/2);	x=
x=(int)(3.4/2)+(int)(7.4/2);	x=
y = 3 + 2 * (x = 7 / 2);	X= , y=

2. 변수 x가 char type이라 가정하고 다음 빈 칸에 x의 계산 결과 값을 적으시오.

x='a'+3;	x=
x='a'+256;	x=

D. (c 언어)

1. 다음 while loop을 for loop을 사용하여 재작성 하시오. (빈칸을 채우세요)

while-loop

```
// sweetie1.c -- a counting loop
#include <stdio.h>
int main(void)
{
     const int NUMBER = 22;
     int count = 1;
     while (count <= NUMBER)
     {
          printf("Be my Valentine!\n");
          count++;
     }
     return 0;
}
```

for-loop

```
// sweetie1.c -- a counting loop
#include <stdio.h>
int main(void)
{
     const int NUMBER = 22;
     int count;
     for (__________; _____________; ___________)
          printf("Be my Valentine!\n");
     return 0;
}
```

2. Guess the result.

```
#include <stdio.h>
#include <stdlib.h>

void main()
{

     int sam;
     int index=0;
     while(++index<5)
     {
          sam=10*index+2;
          printf("sam =%d\n", sam);
     }
}
```

3. Guess the result.

```
#include <stdio.h>
#include <stdlib.h>

void main()
{
     int index=0;
     while(index++<5);
          printf("%d\n", index);
}
```

4. Guess the result.

```
#include <stdio.h>
#include <stdlib.h>

void main()
{
     printf("%d\n", strcmp(“YES”, “YES”));
}
```

5. Guess the result.

```
#include <stdio.h>
int main(){
   for(;NULL;)
      printf("hello world!");
   return 0;
}
```

6. Guess the result.

```
#include <stdio.h>

void a(int n)
{
     if(n>0)
          a(n-1);
     printf("%d\n", n);
}
int main()
{
     a(5);
     return 0;
}
```

7. Guess the result.

```
#include <stdio.h>

void a(int n)
{
     printf("%d\n", n);
     if(n>0)
          a(n-1);
}
int main()
{
     a(5);
     return 0;
}
```

8. Guess the result.

```
#include <stdio.h>

void a(int n)
{
     if(n<0) return ;
     printf("%d\n", n);
     n--;
     a(n-1);
     printf("%d\n", n);
}
int main()
{
     a(5);
     return 0;
}
```

9. Fill in the blanks.

```
#include <stdio.h>
#include <string.h>
void reverse( char str[] )
{ /* Reverses string str */
     int n, h, j, k;
     char ________;
     n = strlen( _________ );
     h = (n / 2);
     for ( j=0, k=(n - 1); (j < h); j++, ________ ) {
          tmp = ____________;
               str[k] = str[j];
               str[j] = ____________;
     } /* end for */
} /* end reverse */
int main( int argc, char** argv ) {
     char s[512];
     strcpy( s, "asdfasdfasdf");
     reverse(s);
     printf( "Reverse: %s\n", s);
     return 0;
} /* end main */
```

10. Guess the result (Fill in the blanks)

```
#include <stdio.h>

int main()
{
     int a=0;
     int b=0;
     int *c=&a;
     printf("%d %x\n", a, &a);
     printf("%d %x\n", b, &b);
     printf("%d %x %x\n", *c, c, &c);
     (*c)++;
     printf("1:%d %d\n", a,b);
     a++;
     printf("2:%d %d\n", a,b);
     (*c)=b;
     printf("3:%d %d\n", a,b);
     b++;
     printf("4:%d %d\n", a,b);
     c=&b;
     (*c)++;
     printf("5:%d %d\n", a,b);
     printf("6:%d %x %x\n", *c, c, &c);
     return 0;
}
```

```
0 0x8410
0 0x8414
0 0x8410 0x8418
1:___
2:___
3:___
4:___
5:___
6:
```