KSU/CCIS/CS	CSC 215	Mid-term exam 1 - Fall 13-14 Time allowed: 1:30
Name: .... ID:		

EXERCISE 1

Write True/ False (20pts)

There is no special logical data type in C.	
In C, memory management is left to the programmer.	
C helps organize software projects more than Java.	
The conversion of a higher order type to a lower order may cause truncation and loss of information.	
The operator &, when applied to a pointer, results in the address of the pointer.	

EXERCISE 2

Select the correct answer (20pts)

Which of the following is **NOT** a correct for naming variables in C?

a) May begin with a letter
b) Cannot contain white space characters
c) Cannot begin with an underscore
d) Must not be a keyword

Select the type of the expression **c/u+s*f** where: c,u,s, f are char, unsigned int, short, float?

a) char b) unsigned int c) short d) float

Select the type that is **NOT** implicitly converted to int before arithmetic operations

a) char b) long c) short

Given the following declaration **int i=1, j, *ip;** Which of the flowing statements in **NOT** correct?

a) ip = &i; b) j = *ip; c) j = &ip; d) (*ip)++;

When a break statement is encountered within a loop body,

a) The execution of the loop body is interrupted, and the program control transfers to the exit point of the loop.
b) All the remaining statements in the loop body are skipped and the loop continuation condition is evaluated next.
c) The program stops.
d) Nothing happens.

EXERCISE 3

Write the output of the following C program. (18 pts)

```
#include <stdio.h>
int main()

  int a = 10 , b=9,c=8;
  int *p = &a;

  printf(“a and *p: %d %d",a, *p);

  (*p)+=10;
  printf(“a and *p: %d %d\n ",a, *p);

  printf(“a > b: %d\n”, a>b);

  printf(“a-c==b+c : %d\n”, a-c==b+c);

  printf(“a+=b!=c: %d\n” , a+=b!=c);
return 0;
}
```

Write the output of the following C program. (12pts)

```
#include <stdio.h>
int main()

   int i, n=20, sum=0;
   for (i = 1; i <= n; i++) {
        if (i % 5 == 0) { continue; }
        sum += i;
   }
   printf(“The value of sum is %d\n”, sum);

   sum=0;
   for (i = 1; i <= n; i++) {
        if (i % 5 == 0) { break; }
        sum += i;
   }
   printf(“The value of sum is %d\n”, sum);

   sum=0;
   while(sum<20){
      sum++;
   }
   printf(“The value of sum is %d\n”, sum);

   return 0;
}
```

Write the output of the corresponding C program that correspond to the following inputs: (10pts)

```
#include<stdio.h>
int main()
{
     int a,b=0;
     int *sum = &b;
     printf("\nEnter numbers:\n");
     scanf("%d", &a);
     while (a >= 0)
     {
          *sum += a;
          scanf("%d", &a);
     }
     printf("The sum is %2d",*sum);
     return 0;
}
```

Inputs	Outputs
1,2,3,0,-1	Result:
3,4,5,6,-5	Result:
0,-5	Result:
-10	Result:

EXERCISE 3

Write a C program that implements the following requirements: (20pts)

The program will

- Ask the user to enter a positive number
- Update a variable holding the maximum number entered so far
- Keep asking for another number until the user enters a negative number.
- Output the maximum number entered by the user

Bonus (5pts) Output the average of all the numbers entered