## CSCI 143 Summer 2012

## Test 2 Preparation

## Question 1

1. What is the output of the following code fragment, if the input is -21, 27, 7, -9, 3? Indicate the type of loop while in this question (counter-controlled or conditional-controlled) and explain your answer.

int i = 5, number, counter = 0, sum = 0 ;

double average= 0.0;

while( i > 0 ){

scanf("%d", &number);

if (number%7 != 0){

sum = sum + number;

counter = counter + 1;

}

i--;

}

if (counter > 0){

average = (double)sum/counter;

}

printf("%d, %d, %f ", counter, sum, average);

## Question 2

1. **What is the output of the following code fragment, if the input is 6, -9, 8, 13, -4, 0?** Indicate the type of loop while in this question (counter-controlled or conditional-controlled) and explain your answer.

int num, counter = 0, sum =0;

scanf(“%d”, &num);

while( num != 0 ){

if (num % 3 == 0){

sum = sum + num;

counter = counter + 1;

}

scanf("%d", &num);

}

printf("%d, %d\n", counter, sum);

## Question 3:

## What is the output of the following code fragment, if the input is 5, 1, 12, -3, 8, -17 ?

int i = 0, number, product = 1, count, temp = 0;

scanf(“%d”, &count);

while( i < count ){

scanf(“%d”, &number);

if ((number < 0 ) || (number % 5 ==0)){

product = product \* number;

temp = temp + 1;

}

i =i + 1;;

}

printf("%d, %d, %d\n", product, i, temp);

## Question 4

What is the output of the following code fragment?

int a = 6, b = 8, c = 12, i;

if (((a + c) /3) == (a \* c) % b){

for(i = 1; i <=3; i++) {

printf ("yana\n");

}

}

else if (a % 3 == 0) {

for ( i = 5; i >= 0; i--){

printf ("yana\n");

}

}

else if ( (b % c) != 2){

printf("dog\n");

}

else{

printf("kids\n");

}

**Question 5**

What is the output of the following code fragment, if the input is -12, -13, 0, -5, 6, -9 ?

int i , number, counter = 0, sum =0;

double average = 0.0;

for(i = 6; i > 0; i-- ){

scanf("%d", &number);

if (number < 0 && number %3 == 0){

sum = sum + number;

counter = counter + 1;

}

}

if(counter >0){

average=(double)sum/counter;

}

printf("%d, %d, %d, %f ", counter, i, sum, average);

**Question 6**

What is the output of the following code fragment, if the input is 7, 12, 3, -4, 5,-6, -3, 21?

int i , number, counter = 0, sum =0, temp = 0;

double average = 0.0;

scanf(“%d”, &counter);

for(i = 0; i < counter; i++ ){

scanf("%d", &number);

if (number > 0 && number %2 != 0){

sum = sum + number;

temp++;

}

}

if(temp > 0){

average=(double)sum/temp;

}

printf("%d, %d, %d, %d, %f ", temp, counter, i, sum, average);

**Question 7**

What is the output of the following code fragment, if the input is A? What is the output of the following code fragment, if the input is d?

int i, res;

char c;

c= getchar();

res = ((int) c) % 10;

for (i =0; i < res; i++){

printf (“%c”, c);

}

**Question 8**

What is the output of the following code fragment?

int main( ){

char c = ‘B’;

char b = ‘a’;

int a = 0, result;

while ( a < 4 ){

if (((c >= ’A’) && (c <= ’Z’) )&&((b >= ’A’) && (b <=’Z’))){

result = 1;

}

else{

result = 0;

}

printf(“%d\n”, result);

a ++;

}

return 0;

}