Midterm 2 Study Guide

Due No due date	**Points** 25	**Questions** 25	**Time Limit** 30 Minutes	**Allowed Attempts** Unlimited

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 1	30 minutes	18.33 out of 25
LATEST	Attempt 2	16 minutes	16.17 out of 25
	Attempt 1	30 minutes	18.33 out of 25

ⓘ Correct answers are hidden.

Submitted Jun 27 at 6:16pm

Incorrect

Question 1

0 / 1 pts

Loop bounds used when reading files or processing network data.

- ○ sentinel bounds
- ○ data bounds
- ○ limit bounds
- ◉ None of these

Question 2

1 / 1 pts

Match each item with the correct question below.

What must I change in the test to go to the next iteration?	advance the loop
Can my loop reach its bounds?	necessary bounds
Has my loop reached its goal?	loop postcondition
What makes this loop quit?	loop bounds

Partial

Question 3

0.33 / 1 pts

Which of these are indefinite loops?

- [ ] data loops
- [ ] limit loops
- [ ] counter controlled loops
- [x] sentinel loops

Question 4

1 / 1 pts

Look at the problem statement below. The _____ of the loop is to count the number of characters in a sentence.

> *How many characters are in a sentence? Count the characters in a string until a period is encountered. If the string contains any characters, then it will contain a period. Count the period as well.*

- ( ) bounds
- (•) goal
- ( ) plan
- ( ) None of these

Partial

Question 5

0.5 / 1 pts

Match each item with the correct statement below.

May not repeat its actions at all	guarded loop
Repeats its actions at least once	indefinite loop
Test for the occurrence of a particular event	guarded loop
Conditions under which a loop will repeat its actions	loop bounds

Question 6

1 / 1 pts

Loops are used to implement selection in C++.

- ( ) True

- (•) False

Incorrect

Question 7

0 / 1 pts

In the classic *for* loop, loop control variables going from 0 to less-than n are said to employ:

- ( ) None of these
- ( ) asymmetric bounds
- ( ) necessary bounds
- (•) symmetric bound
- ( ) intentional bounds

Question 8

1 / 1 pts

Loop bounds often used in scientific and mathematical applications.

- ( ) sentinel bounds
- ( ) None of these
- (•) limit bounds
- ( ) data bounds

Question 9

1 / 1 pts

Look at the problem statement below. The _____ of the loop is that a period was encountered.

> *How many characters are in a sentence? Count the characters in a string until a period is encountered. If the string contains any characters, then it will contain a period. Count the period as well.*

- (•) bounds
- ( ) None of these
- ( ) plan
- ( ) goal

Incorrect

Question 10

0 / 1 pts

How many lines of output are printed?

```
int count = 0;
while (count != 9)
{
    cout << "Monster Mash" << endl;
    if ((count % 2) == 0)
    {
        count++;
    }
    else
    {
        count--;
    }
}
```

- 10
- Infinite
- 9
- 8

Incorrect

Question 11

0 / 1 pts

Default arguments allow you to write several different functions that have the same name.

- True
- False

Question 12

1 / 1 pts

How many lines of output are printed?

```
int i = 0;
int j = 0;
while (i < 25)
{
    i = i + 2;
    j++;
}
cout << j << endl;
```

- 13
- 0

- No output because it does not compile.
- 12

Question 13

1 / 1 pts

To allow *f()* to accept the argument passed here, the parameter *str* should be declared as:

```
void f( . . . str);
int main()
{
    f("hello");
}
```

- string&
- const string
- const string&
- It is not possible for *f()* to change the argument passed here.
- string

Incorrect

Question 14

0 / 1 pts

Assume that the input is `4 4 3 2 5`. What will print?

```
int i = 1;
int n;
cin >> n;
do
{
    i++;
    cin >> n;
}
while (n % 2);
cout << i << endl;
```

- Does not compile
- 2
- 4
- 3
- infinite loop

Question 15

1 / 1 pts

Overloaded functions have the same name but different parameter types.

- (●) True
- ( ) False

Question 16

1 / 1 pts

Overloaded functions have the same name but different parameter names.

- ( ) True
- (●) False

Question 17

1 / 1 pts

What kind of error is this?

```
ex1.cpp:7:9: warning: missing terminating '"' character
    a = "hello world';
        ^
ex1.cpp:7:9: error: expected expression
```

- ( ) None of these
- ( ) Type error (wrong initialization or assignment)
- ( ) Operating system signal or trap
- ( ) Linker error (something is missing when linking)
- (●) Syntax error (mistake in grammar)
- ( ) Compiler error (something is missing when compiling)
- ( ) Runtime error (throws exception when running)

Incorrect

Question 18

0 / 1 pts

What is the value of ***r("xhixhix")***?

```
string r(const string& s)
{
    if (s.size()) {
        auto c = s.at(0);
```

```
        auto t = c == 'x' ? 'y' : c;
        return t + r(s.substr(1));
    }
    return 0;
}
```

- xyhixyhixy
- yhiyhiy
- yyyyyyy
- Stack overflow
- xyyxyyx

Partial

Question 19

0.33 / 1 pts

Examine the code below:

```
int mystery3(int n) {
    if (n < 2) return 1;
    return n * mystery3(n - 1);
}
```

- [ ] mystery3 is efficient
- [ ] mystery3 correctly implements the Fibonacci algorithm
- [ ] mystery3 returns the correct answer for all inputs
- [x] In mysterm3, if (n < 2) is a base case

mystery3 is an implementation of the Factorial algorithm. It completes for all inputs, but negative inputs produce the wrong output. It is efficient and it is not a wrapper. if (n < 2) is a base case.

Question 20

1 / 1 pts

Assume you have a `char` variable named `ch`. How do you "unread" a character already read?

- None of these
- `cin.get(ch);`
- `cin.unget(ch);`

- `cin.peek(ch);`
- `cin.seek(ch);`
- `cin.putback(ch);` (selected)

Question 21

1 / 1 pts

Stream arguments to a function should always be passed:

- None of these
- by const reference
- by reference for input, and const reference for output
- by reference (selected)
- by value

Question 22

1 / 1 pts

What is the value of ***r("xxhixx")***?

```
string r(const string& s)
{
  if (s.empty()) return "";
  if (s.at(0) == 'x') return 'y' + r(s.substr(1));
  return s.at(0) + r(s.substr(1));
}
```

- `yxyxhixyyx`
- Stack overflow
- `xyxyhixyxy`
- `xxyyxx`
- `yyhiyy` (selected)

Question 23

1 / 1 pts

When using the `get()` member function to read a character, leading whitespace is skipped.

- True
- False

Question 24

1 / 1 pts

Stream arguments to a function should:

- be as specific as possible (`istream`, `ifstream` or `istringstream`)
- be copied before being passed
- be as general as possible (`istream` and `ostream`)
- never be the `cin` or `cout` objects
- None of these

Incorrect

Question 25

0 / 1 pts

What does this function do?

```
int mystery(int n)
{
  if (n == 1) return 1;
  return n * mystery(n+1);
}
```

- Computes the Gauss series of n
- Computes the Factorial number n
- Produces a stack overflow
- Computes the Fibonacci number n
- Computes the reverse of the input n