Midterm 2 Study Guide Results

Correct answers are hidden.

Submitted Jun 28 at 8:59pm

Question 1

1 / 1 pts

Match each item with the correct statement below.

Actions that occur after the loop is complete	postcondition
Actions occurring inside the loop's body	operation
Actions that occur before the loop is encountered	precondition
A test the determines if the loop should be entered	bounds

Question 2

1 / 1 pts

A ***guarded*** loop is also known as a ***test-at-the-top*** loop.

- (●) True
- ( ) False

Question 3

1 / 1 pts

In the classic *for* loop, which portion of code is executed ***after the last statement in the loop body***?

- ( ) condition expression
- (●) update expression
- ( ) None of these
- ( ) initialization statement
- ( ) assignment statement
- ( ) first statement following the loop

Question 4

1 / 1 pts

This idiomatic pattern is used to count from one value to another.

```
for (int i = 0; i < 10; i++)
    cout << i;
cout << endl;
```

- ( ) True
- (●) False

Question 5

1 / 1 pts

This idiomatic pattern is used to count from one value to another.

```
for (int i = 1; i <= 10; i++)
    cout << i;
cout << endl;
```

- (●) True
- ( ) False

Question 6

1 / 1 pts

Loop bounds often used in scientific and mathematical applications.

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

Question 7

1 / 1 pts

The highlighted section below illustrates.
While more-characters:

```
Given: the variable str is a string (may be empty)
Create the counter variable, initialized to -1
If the variable str has any characters then
{
    Set counter to 0
    Create the variable current-character as a character
    Place the first character in str into current-character
    While more-characters and current-character not a period
    {
       Add one to (or increment) the counter variable
       Store the next character from str in current-character
    }
    If current-character is a period then
       Add one to the counter to account for the period.
    Else
      Set counter to -2
}
If counter is -1 the string was empty
Else if counter is -2 there was no period
```

- (●) a necessary condition
- ( ) a postcondition
- ( ) None of these
- ( ) a loop guard
- ( ) a boundary condition
- ( ) an intentional condition

Question 8

1 / 1 pts

What prints?

```
string str = "Hello";
for (auto i = 0, len = str.size(); i < len; i++)
```

```
cout << str.at(i);
```

- (•) Does not compile
- ( ) Crashes when run
- ( ) `Hello`
- ( ) Undefined behavior
- ( ) `Hell`

Question 9

1 / 1 pts

Which line represents the ***intentional bounds*** in this loop?

```
1.      string s("Hello CS 150");
2.      while (s.size())
3.      {
4.         if (s.at(0) == 'C') break;
5.         s = s.substr(1);
6.      }
7.      cout << s << endl;
```

- (•) 4
- ( ) 2
- ( ) 5
- ( ) None of these

Question 10

1 / 1 pts

Examine this code. Which is the best prototype?

```
string s = "dog";
cout << upper(s) << endl;   // DOG
cout << s << endl;          // dog
```

- ( ) `string upper(string);`
- (•) `string upper(const string&)`
- ( ) `string upper(string&)`
- ( ) `void upper(string&)`
- ( ) None of these

Question 11

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
```

- ( ) Operating system signal or trap
- (•) Syntax error (mistake in grammar)
- ( ) None of these

- Runtime error (throws exception when running)
- Type error (wrong initialization or assignment)
- Compiler error (something is missing when compiling)
- Linker error (something is missing when linking)

Question 12

1 / 1 pts

What prints?

```
void fn(int, double, double&) { cout << "A" << endl; }
void fn(int, int, double&) { cout << "B" << endl; }
void fn(int, int, double) { cout << "C" << endl; }
void fn(int, int, int) { cout << "D" << endl; }

int main()
{
    fn(1, 2, 3.5);
}
```

- A
- Syntax error: no candidates
- D
- Syntax error: ambiguous
- (•) C
- B

Question 13

1 / 1 pts

An incomplete, yet compilable, linkable and executable function is called a _____ ?

- declaration
- (•) stub
- None of these
- prototype

Question 14

1 / 1 pts

Match each item with the correct statement below.

File containing the declarations or prototypes	interface
Program which uses the functions in a library.	client
File containing the function definitions	implementation
File which contains instructions for building your program	makefile

Question 15

1 / 1 pts

An ***undeclared*** error message is a runtime error.

- ○ True
- ◉ False

Incorrect

Question 16

0 / 1 pts

What prints here?

```
auto a = 3, b = 3;
cout << a == b ? "panda" : "tiger" << endl;
```

- ○ Does not compile
- ○ tiger
- ◉ panda
- ○ Undefined behavior
- ○ Crashes when run

Question 17

1 / 1 pts

What is the output of the following?

```
bool token1 = true;
while (token1)
{
    for (int i = 0; i < 5; i++)
    {
        cout << "Hello there" << endl;
    }
    token1 = false;
}
```

- ◉ “Hello there” will be displayed 5 times.
- ○ No output.
- ○ “Hello there” will be displayed infinite times.
- ○ No output because of compilation error.

Question 18

1 / 1 pts

Which line runs the `prt` program and stores its output in a new file named `x.data`?

- (●) `./prt > x.data`
- ( ) `./prt >> x.data`
- ( ) `./prt < x.data`
- ( ) None of these
- ( ) `./prt << x.data`
- ( ) `./prt >1 x.data`

Question 19

1 / 1 pts

When using `cin >> ch;` to read a character, leading whitespace is not skipped.

- ( ) True
- (●) False

Question 20

1 / 1 pts

In C++, the standard stream `stderr` is used to initialize the `cout` object.

- ( ) True
- (●) False

Incorrect

Question 21

0 / 1 pts

What does this code do?

```
ifstream in("temp.txt");
char x;
int i{0};
while (in >> x) i++;
cout << i << endl;
```

- ( ) Counts the number of lines in the file
- ( ) Gets stuck in an endless loop
- ( ) Counts the number of non-space characters in the file
- (●) Counts the number of words in the file
- ( ) Counts the number of digits in the file
- ( ) Counts the number of characters in the file

Question 22

1 / 1 pts

The operating system stream `stdin` is connected to your monitor by default.

- ( ) True

False

Question 23

1 / 1 pts

Match each item with the correct statement below.

Has a single `char&` parameter	get()
Returns the last character read to the input stream	unget()
Examines, but does not read the next character in an input stream	peek()
Replaces the last character read with any character	putback()
Called implicitly when an input statement is used as a test condition.	fail()
A predicate function	isalpha()
Converts its value argument to a character and sends it to output.	put()

Question 24

1 / 1 pts

Formatted I/O means that you read and write data line-by-line.

True

False

Question 25

1 / 1 pts

To use a disk file as a data stream source or sink, use the `<ifstream>` header

True

False