

Midterm 2 Study Guide

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

	Attempt	Time	Score
KEPT	Attempt 1	30 minutes	18.33 out of 25
LATEST	Attempt 5	20 minutes	17.83 out of 25
	Attempt 4	30 minutes	17.67 out of 25
	Attempt 3	22 minutes	16 out of 25
	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 8:25pm



Question 1

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

Incorrect

Question 2

0 / 1 pts

Below is the illustration from the loop building strategy. The **highlighted lines** represent. While more-characters and current-character not a period:

```
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
```

- ☐ bounds precondition
- ☐ loop bounds
- ☒ goal operation
- ☐ loop postcondition
- ☐ advancing the loop
- ☐ goal precondition



Question 3

1 / 1 pts

Loop bounds used when reading files or processing network data.

- ☐ None of these
- ☐ limit bounds
- ☐ sentinel bounds
- ☒ data bounds

Question 4

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 5

1 / 1 pts

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

- ☐ symmetric bound
- ☐ None of these
- ☐ intentional bounds
- ☒ asymmetric bounds
- ☐ necessary bounds

Question 6

1 / 1 pts

Below is the illustration from the loop building strategy. The **highlighted lines** represent. Create the variable current-character as a character:

```
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
```

- ☒ bounds precondition
- ☐ goal precondition
- ☐ loop postcondition
- ☐ goal operation
- ☐ advancing the loop
- ☐ loop bounds

Incorrect

Question 7

0 / 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;
```

☐ 5

☒ 2

☐ None of these

☐ 4

Question 8

1 / 1 pts

How many times is this loop **entered**? (*That is, how many times is i printed?*)

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

☐ 10

☐ Never

☐ 9

☒ 11

Question 9

1 / 1 pts

Which of these are **guarded** loops?

☒ for

☒ while

☐ if-else

☐ if

☐ do-while

Question 10

1 / 1 pts

What prints here?

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

☐ Crashes when run

☐ Undefined behavior

☒ panda

☐ Does not compile

☐ tiger

Incorrect

Question 11

0 / 1 pts

What kind of error is this?

```
ex1.cpp:6:5: error: use of undeclared identifier 'a'
    a = 4;
    ^
```

☐ Linker error (something is missing when linking)

☐ Compiler error (something is missing when compiling)

☐ Runtime error (throws exception when running)

☐ None of these

☐ Type error (wrong initialization or assignment)

☐ Operating system signal or trap

☒ Syntax error (mistake in grammar)

Question 12

1 / 1 pts

Which prototypes in the following header file contain errors?

```
#ifndef EXAMPLE_H
#define EXAMPLE_H
#include <string>

std::string f1(int a);
int f2(double);
void f3(std::string& s, int n);
double f4();

#endif
```

☐ *f3*

☐ *f1*

☐ *f4*

☒ None of these

☐ *f2*

Question 13

1 / 1 pts

What prints here?

```
auto a = 3, b = 3;
cout << (a != b ? "panda": a % 2 ? "stork": "tiger") << endl;
```

☐ tiger

☒ stork

☐ Undefined behavior

☐ Does not compile

☐ panda



Question 14

1 / 1 pts

What is the output of the following?

```
int i = 1;
while (i <= 10)
{
    cout << "Inside the while loop" << endl;
    i = i * 11;
}
```

☐ No output because of compilation error.

☒ "Inside the while loop" will be displayed only once.

☐ No output after successful compilation.

☐ "Inside the while loop" will be displayed 10 times.

Question 15

1 / 1 pts

Which of these are **targets**?

```
EXE=digit-tester
OBJS=client.o digits.o
$(EXE): $(OBJS)
    $(CXX) $(CXXFLAGS) $(OBJS) -o $(EXE)
```

- ☒ digit-tester
- ☐ digits.o
- ☐ None of these
- ☒ \$(EXE)
- ☐ client.o

Incorrect

Question 16

0 / 1 pts

What prints here?

```
int i = 5;
while (i) cout << i--;
cout << endl;
```

- ☐ 4321
- ☒ Infinite loop
- ☐ Syntax error: i is not a Boolean expression
- ☐ 43210
- ☐ 54321



Question 17

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

Partial

Question 18

0.5 / 1 pts

Which command displays a the names of the files in a folder in reverse order?

☒ `ls -r`

☐ `ls | sort`

☐ `ls | wc -l`

☐ None of these

☐ `ls | sort -r`

☐ `ls -r | sort`

Question 19

1 / 1 pts

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

☒ True

☐ False

Question 20

1 / 1 pts

`cat < a.txt > b.txt` makes a copy of `a.txt` in the file `b.txt`

☒ True

☐ False

Incorrect

Question 21

0 / 1 pts

What is the value of `r(74757677)`?

```
int r(int n)
{
    if (n) return (n % 10 == 7) + r(n / 10);
    return 0;
}
```

☒ 8

☐ Stack overflow

☐ Does not compile

☐ 3

☐ 5

Question 22

1 / 1 pts

The statement `x = cin.get(ch)` returns the next character from input and stores it in x.

☐ True

☒ False

Incorrect

Question 23

0 / 1 pts

After opening the input stream `in`, which of these ***cannot be used*** to see if the file was successfully opened?

☒ `if (in.fail()) { /* couldn't open */ }`

☐ `if (in.opened()) { /* opened ok */ }`

☐ `if (in) { /* opened ok */ }`

☐ `if (in.good()) { /* opened ok */ }`

☐ `if (in.bad()) { /* couldn't open */ }`

Question 24

1 / 1 pts

Stream arguments to a function should:

☐ None of these

☐ be as specific as possible (`istream`, `ifstream` or `istringstream`)

☒ be as general as possible (`istream` and `ostream`)

☐ never be the `cin` or `cout` objects

☐ be copied before being passed

Partial

Question 25

0.33 / 1 pts

Which command sorts the lines in `input.txt` and stores the **sorted** output in a new file named `sorted.txt`?

☐ cat < input.txt | sort > sorted.txt

☐ sort < input.txt | cat > sorted.txt

☐ cat < input.txt > sorted.txt | sort

☐ cat | input.txt < sort > sorted.txt

☒ sort < input.txt > sorted.txt

☐ None of these

