

# 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	<a href="#">Attempt 1</a>	30 minutes	18.33 out of 25
LATEST	<a href="#">Attempt 3</a>	22 minutes	16 out of 25
	<a href="#">Attempt 2</a>	16 minutes	16.17 out of 25
	<a href="#">Attempt 1</a>	30 minutes	18.33 out of 25

⚠ Correct answers are hidden.

Submitted Jun 27 at 6:40pm

Incorrect

Question 1

0 / 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

Incorrect

Question 2

0 / 1 pts

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

☐ True

☒ False

Question 3

1 / 1 pts

Loops are used to implement selection in C++.

☐ True

☒ False

#### Question 4

1 / 1 pts

Loop bounds often used in scientific and mathematical applications.

☒ limit bounds

☐ data bounds

☐ None of these

☐ sentinel bounds

#### Question 5

1 / 1 pts

Which line ***advances the 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;
```

☐ None of these

☒ 5

☐ 4

☐ 2

#### Question 6

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.*

☐ plan

☐ None of these

☒ bounds

☐ goal

### Question 7

1 / 1 pts

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

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

☒ 10

☐ Never

☐ 11

☐ 9

Incorrect

### Question 8

0 / 1 pts

Below is the illustration from the loop building strategy. The **highlighted lines** represent. If current-character is a period then:

```
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 operation

☒ loop bounds

☐ goal precondition

☐ loop postcondition

☐ advancing the loop

### Question 10

1 / 1 pts

In a do-while loop, (*condition*) is followed by a semicolon.

☒ True

☐ False



### Question 11

1 / 1 pts

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

☐ declaration

☒ stub

☐ prototype

☐ None of these

Incorrect

### Question 12

0 / 1 pts

A parameter with a default argument cannot appear before a parameter without a default argument.

☐ True

☒ False

What prints here?

```
auto a = 1;
switch (a)
{
    case 1: cout << "1";
    case 2: cout << "2";
    case 3:
}
cout << endl;
```

- ☐ Does not compile
- ☐ 2
- ☒ 12
- ☐ 1
- ☐ Prints nothing

Having an empty case not followed by anything is illegal.



In a library, the *implementation* file:

- ☐ consists of instructions that produce the executable
- ☒ consists of function definitions
- ☐ None of these
- ☐ consists of function calls
- ☐ consists of declarations or prototypes

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 161 / 1 pts

What prints here?

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

☒ stork

☐ Undefined behavior

☐ panda

☐ Does not compile

☐ tiger

Question 171 / 1 pts

Implementation files may use the statement using namespace std;

☒ True

☐ False



IncorrectQuestion 180 / 1 pts

The getline() function is a member function in the istream class.

☒ True

☐ False

Question 191 / 1 pts

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

```
string r(const string& s)
{
```

```
auto front = s.substr(0, 1);  
if (front.empty()) return "";  
return (front == "x" ? "" : front) + r(s.substr(1));  
}
```

☐ "a b "

☐ "ax bx "

☐ Stack overflow

☒ "ab"

☐ "xxxx"

### Question 20

1 / 1 pts

Assume the user types "brown cow" when this code runs. What type is ch2?

```
char ch1;  
auto ch2 = cin.get(ch1);
```

☐ int

☒ istream&

☐ bool

☐ char

☐ ostream&

### Question 21

1 / 1 pts

Complete the following code in the upper filter program.

```
char ch;  
while (cin.get(ch))  
    cout.put(_____);
```

☐ ch + 32

☒ toupper(ch)

☐ toUpper(ch)

☐ ch - ('a' - 'A')

### Question 22

1 / 1 pts

What is the value of  $r(3, 3)$ ?

```
int r(int n, int m)
{
    if (m) return n * r(n, m - 1);
    return 1;
}
```

☒ 27

☐ 3

☐ 12

☐ 9

☐ Stack overflow

Incorrect

### Question 23

0 / 1 pts

Assume the user types "brown cow" when this code runs. What prints?

```
char c;
cout.put(cin.get(c));
```

☒ b

☐ Does not compile

☐ brown cow

☐ true (or 1)

### Question 24

1 / 1 pts

What does this function do?

```
void myfun(const string& word)
{
    if (word.size() == 0) return;
    myfun(word.substr(1));
    cout << word[0];
}
```

☒ Prints the string word in reverse

☐ Prints the string word

☐ Prints the length of the string word

☐ Prints the string word both forward and reverse



**Question 25****1 / 1 pts**

Before you run your program, asking the operating system to connect standard output to a file is called redirection.

---

☒ True

☐ False

