

Midterm 3 Study Guide

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

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Attempt History

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KEPT	Attempt 16	30 minutes	24 out of 25
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	Attempt 5	30 minutes	17 out of 25
	Attempt 4	21 minutes	23 out of 25
	Attempt 3	26 minutes	19.89 out of 25
	Attempt 2	30 minutes	22.5 out of 25
	Attempt 1	27 minutes	21 out of 25



ⓘ Correct answers are hidden.

Submitted Jul 18 at 9:19pm

Question 1

1 / 1 pts

Which of the following loop patterns are used here?

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

- ☒ counter-controlled loop
- ☐ data loop
- ☐ primed loop
- ☒ sentinel loop
- ☐ iterator or range loop
- ☐ limit loop
- ☒ loop-and-a-half
- ☐ inline test

Question 2

1 / 1 pts

Match each item with the correct standard header below.

Read and write characters to memory using streams	<div>sstream</div>
Connect a disk file to an input or output stream.	<div>fstream</div>
Use the predefined stream objects cin and cout	<div>iostream</div>
Determine the category of a character	<div>cctype</div>
Modify the way that memory is converted to characters on input or output	<div>omanip</div>

Question 3

1 / 1 pts

A specialized error handling block of code, is called a try block.

☐ True

False

Question 4

1 / 1 pts

The directives `#if defined(symbol)` and `#ifndef symbol` mean, essentially, the same thing.

True

False

Question 5

1 / 1 pts

The `try` block is followed by one or more ____ blocks.

finally

catch

do

throw

Question 6

1 / 1 pts

Which call below produces 5?

```
template <typename T>
void addem(T a, T b)
{
    cout << a << " + " << b << "->"
        << (a + b) << endl;
}
```

addem(3.0, 2.5)

None of these

addem<int>(3, 2.5);

addem(3, 2.5);

addem<double>(3, 2.5);

Question 7

1 / 1 pts

Which of the following loop patterns are used here?

```
size_t pos = 0;
char ch;
in.get(ch);
while (ch != 'Q')
{
    pos++;
    in.get(ch);
}
```

inline test

data loop

primed loop

limit loop

iterator or range loop

loop-and-a-half

sentinel loop

counter-controlled loop

Question 8

1 / 1 pts

The heading of a `try` block can contain ellipses in place of a parameter.

True

False



Question 91 / 1 pts

The standard library version of `sqrt(-2)` returns the not-a-number error code.

☒ True

☐ False

Question 101 / 1 pts

The C++ specific term for classes like `vector` are template classes.

☒ True

☐ False

Question 111 / 1 pts

Which line assigns a dime to the variable `c`?

```
enum class Coin
{
    PENNY = 1, NICKEL = 5, DIME = 10, QUARTER = 25
};

Coin c;
```

☐ `c = static_cast<int>(DIME);`

☐ `c = static_cast<Coin>(.25);`

☐ `c = DIME;`

☒ `c = Coin::DIME;`

Question 121 / 1 pts

The following code is *illegal*.

```
struct {int hours, seconds; } MIDNIGHT{0, 0};
```

☐ True

☒ False

Question 131 / 1 pts

What prints when this code runs?

```
enum class Coin
{
    PENNY = 1, NICKEL = 5, DIME = 10, QUARTER = 25
};

Coin c = Coin::NICKEL;
cout << static_cast<int>(c) << endl;
```

☒ 5

☐ Does not compile; Missing semicolon at end of list of members.

☐ 2

☐ Does not compile; Cannot assign `Coin::NICKEL` to `c`.

Question 141 / 1 pts

Given the following structure and variable definitions, which data members are *initialized*?

```
struct Employee
{
    long empID;
    std::string lastName;
    double salary;
    int age;
};

Employee bob;
```

☒ lastName

☐ None of these

☐ age

☐ salary

☐ empID

Question 151 / 1 pts

The pop_back member function adds elements to the end of a vector.

☐ True

☒ False

Question 161 / 1 pts

The declaration: vector<int> v; creates a vector variable but no vector object.

☐ True

☒ False

Question 171 / 1 pts

Examine the following definition. What is the syntax error?

```
struct Employee
{
    long empID;
    std::string lastName;
    double salary;
}
```

☐ data members cannot be different types

☐ there is no syntax error

☐ use of std:: in front of the string definition.

☒ missing a semicolon after the structure definition

Question 181 / 1 pts

Match each item with the correct term below.

Used to access the data inside a variable

variable name

The meaning assigned to a set of bits stored at a memory location

variable value

Expression using the address operator

p = &a;

Expression using the dereferencing operator

y = *a;

Question 191 / 1 pts

Which line throws and out_of_range exception?

```
double speed[5] = {. . .};
```

☐ cout << speed[1] << endl;

☐ cout << speed[5] << endl;

☐ cout << speed[4] << endl;

☐ cout << speed[0] << endl;

☒ None of these

Question 201 / 1 pts





The variable *buf* is a pointer to a region of memory storing contiguous *int* values. (This is similar to your homework, where you had a region of memory storing *unsigned char* values.) The four lines shown here are legal. **Which operation is illegal?**

```
int *p1 = buf;
const int *p2 = buf;
int * const p3 = buf;
const int * p4 const = buf;
```

☒ *p2 = 7;

☐ p2++;

☐ *p3 = 5;

☐ *p1 = 3;

☐ p1++;

Question 211 / 1 pts

Which area of memory are global variables stored in?

☐ Heap

☐ Stack

☒ Static storage area

☐ Text

Question 221 / 1 pts

If *img* is a pointer to the first byte in an image loaded into memory, *Pixel* is a structure , you can create a *Pixel* pointer pointing to the image by writing: *Pixel *p = reinterpret_cast<Pixel *>(img);*

☒ True

☐ False

Question 231 / 1 pts

What is stored in the last element of *nums*?

```
int nums[3] = {1, 2};
```

☒ 0

☐ Undefined value

☐ Syntax error in array declaration

☐ 2

☐ 1

IncorrectQuestion 240 / 1 pts

Explicitly initializing an array like this: *int a[3] = {1, 2, 3};* requires the size to be the same or larger than the number of elements supplied.

☐ True

☒ False

Question 251 / 1 pts

The *static_cast* instruction changes way that a pointer's indirect value is interpreted.

☐ True

☒ False