

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

	Attempt	Time	Score
KEPT	Attempt 4	21 minutes	23 out of 25
LATEST	Attempt 6	25 minutes	21 out of 25
	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 12 at 9:35pm



Incorrect Question 1 0 / 1 pts

To use strings as a data stream source or sink, use the <stringstream> header

- ☒ True
- ☐ False

Question 2 1 / 1 pts

Variables tested with the #if preprocessor directive are created using #define.

- ☒ True
- ☐ False

Question 3 1 / 1 pts

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

- ☐ True
- ☒ False

Question 4 1 / 1 pts

In the *primed loop pattern*, you read data before the loop and at the end of the loop.

- ☒ True
- ☐ False

Question 5 1 / 1 pts

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

- ☒ True
- ☐ False

Question 6 1 / 1 pts

The predefined constant __cplusplus indicates which version of the C++ standard is being used.

- ☒ True
- ☐ False

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



Question 8

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;
```

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

Question 9

1 / 1 pts

What happens when you execute the (erroneous) line:

```
assert(2 + 2 == 5);
```

- ☒ The program prints an error message and terminates
- ☐ An exception is thrown, which may be caught.
- ☐ Since this is impossible, the code will not compile.
- ☐ Nothing happens. The statement is not true, so it is skipped
- ☐ The program prints an error message and continues running

Question 10

1 / 1 pts

What is the correct prototype for the input operator?

```
enum class Suit
{
    HEARTS, SPADES, CLUBS, DIAMONDS
};
```

- ☐ istream& operator<<(istream& in, Suit& suit);
- ☒ istream& operator>>(istream& in, Suit& suit);
- ☐ istream& operator>>(istream& in, const Suit& suit);
- ☐ istream& operator>>(istream& in, Suit suit);



Incorrect

Question 11

0 / 1 pts

Structure variables should be passed to functions *by value*.

- ☒ True
- ☐ False

Incorrect

Question 12

0 / 1 pts

Assume that you have an iterator named iter which refers to an element in the vector named v. Which moves the iterator so that it refers to the **next** element in the vector?

- ☒ iter++;
- ☐ *iter;
- ☐ None of these
- ☐ iter.next();
- ☐ ++iter;

Question 13

1 / 1 pts

The push_back member function adds elements to the end of a vector expanding the vector 's capacity if needed.

- ☒ True
- ☐ False

Incorrect

Question 14

0 / 1 pts

Assume that v contains [1, 2, 3]. The result of writing cout << v[4]; is a compiler error.

- ☒ True
- ☐ False

Question 15

1 / 1 pts

Which line of code can be added to print the value 4?

```
int main()
{
    struct S {int a, b; };
    vector<S> v;
    S s{3, 4};
    v.push_back(s);
    // Add code here
}
```

- ☐ cout << v.b.at(0) << endl;
- ☐ cout << v[0][0] << endl;
- ☐ None of these
- ☐ cout << v.b << endl;
- ☒ cout << v.at(0).b << endl;



Question 161 / 1 pts

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

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

Employee bob{777, "Zimmerman", 5000000.0, 76};
```

☒ None of these

☐ age

☐ empID

☐ lastName

☐ salary

Question 171 / 1 pts

Match each item with the correct statement below.

Points to the first element in v

v.begin()

Creates the empty vector []

vector<int> v;

Safely returns a reference to the fourth element in v

v.at(3);

Removes the last element in v

v.pop_back()

Question 181 / 1 pts

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

☐ True

☒ False

Question 191 / 1 pts

In C++ using `==` to compare one array to another is permitted (if meaningless).

☒ True

☐ False

Question 201 / 1 pts

The value for the variable *b* is stored:

```
int a = 1;
void f(int b)
{
    int c = 3;
    static int d = 4;
}
```

☐ The example does not provide enough information

☐ in the CPU machine registers

☒ on the stack

☐ on the heap

☐ in the static storage area

Question 211 / 1 pts

The size of the array is **not** stored along with its elements.

☒ True

☐ False

Question 221 / 1 pts

In C++, global variables are stored:

☒ in the static storage area

☐ on the stack

☐ on the heap

☐ in CPU registers

☐ on your hard disk

Question 231 / 1 pts

Assume that *ppi* correctly points to *pi*. Which line prints the address of *ppi*?

```
int main()
{
    double pi = 3.14159;
    double *ppi;
    // code goes here
    // code goes here
}
```

☐ cout << π

☐ None of these

☐ cout << ppi;

☒ cout << &ppi;

☐ cout << *ppi;

Question 241 / 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 251 / 1 pts

How can we print the address where *n* is located in memory?

```
int n{500};
```

☐ cout << n& << endl;

☐ cout << *(&n) << endl;

☐ cout << n << endl;

☐ cout << *n << endl;

☒ cout << &n << endl;

