

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 30	23 minutes	25 out of 25
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	Attempt 22	24 minutes	24 out of 25
	Attempt 21	18 minutes	24 out of 25
	Attempt 20	30 minutes	19 out of 25
	Attempt 19	20 minutes	23 out of 25
	Attempt 18	30 minutes	21 out of 25
	Attempt 17	30 minutes	23.5 out of 25
	Attempt 16	30 minutes	24 out of 25
	Attempt 15	30 minutes	21 out of 25
	Attempt 14	30 minutes	23 out of 25
	Attempt 13	24 minutes	22 out of 25
	Attempt 12	16 minutes	24 out of 25
	Attempt 11	17 minutes	19 out of 25
	Attempt 10	17 minutes	22 out of 25
	Attempt 9	20 minutes	20 out of 25
	Attempt 8	21 minutes	20 out of 25
	Attempt 7	25 minutes	21.5 out of 25
	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 20 at 7:03pm

Question 1

1 / 1 pts

A catch block is a block of code where runtime or logical errors may occur.

- ☐ True
- ☒ False

Question 2

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);
}
```

- ☒ primed loop
- ☐ inline test
- ☒ sentinel loop
- ☐ counter-controlled loop
- ☐ data loop
- ☐ loop-and-a-half

☐ iterator or range loop

☐ limit loop

Question 3

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;
```

☐ limit loop

☒ sentinel loop

☐ primed loop

☐ data loop

☒ loop-and-a-half

☐ iterator or range loop

☒ counter-controlled loop

☐ inline test



Question 4

1 / 1 pts

In a sequence of `try/catch` blocks, the last `catch` block of that sequence should be ____.

☐ `catch(exception){}`

☐ `catch(str){ }`

☐ `catch(int x){ }`

☒ `catch(...){ }`

Question 5

1 / 1 pts

To deal with errors in a program, such as a string subscript out of range or an invalid argument to a function call, several classes are derived from the `class` ____.

☐ `runtime_error`

☐ `logic_exception`

☒ `logic_error`

☐ `exception`

Question 6

1 / 1 pts

A(n) ____ is an occurrence of an undesirable situation that can be detected during program execution.

☐ bug

☐ misfire

☒ exception

☐ crash

Question 7

1 / 1 pts

You can report a logical error encountered in your code by using the `throw` keyword.

☒ True

☐ False

Question 8

1 / 1 pts

Match each item with the correct loop form below.

Indefinite limit loop that reduces its input	<div>while (n != 0) { n /= 2; }<div>▼</div></div>
Indefinite limit loop that uses successive approximations	<div>while(abs(g1 – g2) >= EPSILON){<div>▼</div></div>
Counter-controlled symmetric loop for producing a sequence of data	<div>for (int i=12; i <= 19; i++) { . . }<div>▼</div></div>
Indefinite data loop that uses raw input	<div>while(cin.get(ch)) { . . }<div>▼</div></div>
Counter-controlled asymmetric loop for processing characters	<div>for (size_t i=0, len=s.size(); i < l{<div>▼</div></div>
Iterator loop that may change its container	<div>for (auto& e : col) { . . }<div>▼</div></div>
Iterator loop that cannot change its container	<div>for (auto e : col) { . . }<div>▼</div></div>
Counter-controlled loop for processing substrings	<div>for (size_t i=4, slen=4, len=s.siz{<div>▼</div></div>
Indefinite data loop that uses formatted input	<div>while(cin >> n) { . . }<div>▼</div></div>



Question 9

1 / 1 pts

Assume that you have the following code:

```
istreamstring in("one");
int n;
```

Which of these (erroneous) statements cause the program to terminate?

- ☐ in >> n;
- ☒ assert(2 + 2 == 5);
- ☐ cout << sqrt(-1);
- ☒ cout << stoi("one");

Question 10

1 / 1 pts

Examine the following code. Which element is erased?

```
vector<int> v{1, 2, 3};
v.erase(begin(v), end(v));
```

- ☐ 3
- ☐ Does not compile
- ☒ All the elements are erased
- ☐ 1
- ☐ 2

Question 11

1 / 1 pts

What header do you need to include to use the functions from the STL?

- ☐ None of these
- ☒ <algorithm>
- ☐ <functional>
- ☐ <stdalgo>
- ☐ <stl>

Incorrect

Question 12

0 / 1 pts

This is the correct syntax for a C++ scoped enumeration.

enum WEEKEND {SATURDAY, SUNDAY};

☒ True

☐ False

1 / 1 pts

An _____ is an object which specifies the position of an element inside a container, regardless of what kind of container you use.

- ☒ iterator
- ☐ pointer
- ☐ subscript
- ☐ index
- ☐ lambda

1 / 1 pts

The declaration: `vector<string> v(5, "bob");` creates a vector containing five string objects, each containing "bob".

☒ True

☐ False



Question 15

Question 15

0 / 1 pts

Assuming the following variable definition, which statement creates an object which refers to the last element in **v** and which prohibits you from changing **v**?

```
vector<double> v{1.2, 2.3, 3.4};
```

☐ `auto b = end(v);`

☐ `auto d = cend(v);`

☐ None of these

☐ `auto a = begin(v);`

☒ `auto c = cbegin(v);`

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, const Suit& suit);`

☐ `istream& operator<<(istream& in, Suit& suit);`

☐ `istream& operator>>(istream& in, Suit suit);`

1 / 1 pts

Which of these are true?

```
int main()
{
    vector<int> v{1, 2, 3};
    for (auto i = v.size() - 1; i >= 0; i--)
        cout << v.at(i) << " ";
    cout << endl;
}
```

☐ Endless loop (may crash, but not necessarily)

☒ Prints 3 2 1

☒ Crashes when run

☒ Issues a compiler warning, but no error

☐ Compiler error (does not compile)

Question 18

1 / 1 pts

The elements of a C++ *string* array with no explicit initialization, created in a function will be set to *NULL*.

- ☐ True
- ☒ False

Incorrect

Question 19

0 / 1 pts

The allocated size of a built-in C++ array cannot be changed during runtime.

- ☐ True
- ☒ False

Question 20

1 / 1 pts

The value for the variable *d* 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
- ☒ in the static storage area
- ☐ on the heap

Question 21

1 / 1 pts

If *p* is a pointer to a structure, and the structure contains a data member *x*, you can access the data member by using the notation: **p.x*

- ☐ True
- ☒ False

Question 22

1 / 1 pts

Which array definition produces {0, 1, 2}?

```
int SIZE = 3;
int a1[SIZE];
int a2[3];
int a3[3]{};
int a4[] = {1, 2, 3};
int a5[3] = {1, 2};
```

- ☒ None of these
- ☐ a2
- ☐ a1
- ☐ a5
- ☐ a3

Question 23

1 / 1 pts

C++ arrays have no built-in functions for inserting and deleting.

- ☒ True
- ☐ False



Incorrect

Question 24

0 / 1 pts

What is printed when you run this code?

```
int n{};
int *p;
*p = &n;
cout << *p << endl;
```

- ☐ None of these
- ☒ The value 0 (stored in n)
- ☐ Will not compile
- ☐ The address value where *n* is stored
- ☐ No compilation errors, but undefined behavior when run

Question 25

1 / 1 pts

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

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

- ☐ Syntax error in array declaration
- ☐ Undefined value
- ☐ 1
- ☒ 0
- ☐ 2