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 21	18 minutes	24 out of 25
LATEST	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 19 at 12:52pm

Question 1

1 / 1 pts

Match each item with the correct standard header below.

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

Question 2

1 / 1 pts

Complete the code fragment below, which is designed to throw an `illegal_length` exception if `string` variable `accountNumber` has more than seven characters.

```
if (accountNumber.size() > 7)
{
    _____________________________;
}
```

- ○ `throw new illegal_length("Account number exceeds maximum length");`
- ○ `throws illegal_length("Account number exceeds maximum length");`
- ◉ `throw illegal_length("Account number exceeds maximum length");`
- ○ `throws new illegal_length("Account number exceeds maximum length");`

Incorrect

Question 3

0 / 1 pts

A loop that reads data until the input stream signals that it is done is called a sentinel loop.

- ◉ True
- ○ False

Question 4

1 / 1 pts

Which of the following loop patterns are used here?

```
string s{"hello CS 150"};
for (auto e : s)
{
    if (toupper(e))
        out.put('x');
}
```

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

Question 5

1 / 1 pts

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

- ◉ exception
- ○ bug
- ○ misfire
- ○ crash

Question 6

1 / 1 pts

What happens when you execute the (erroneous) line:

```
auto x = sqrt(-1);
```

- ○ The statement is skipped and the program continues
- ◉ The function returns an error value and the program continues
- ○ The program prints an error message and terminates
- ○ The code does not compile. You cannot take the square root of a negative number.
- ○ The function throws and exception. If not caught the program terminates.

Question 7

1 / 1 pts

The preprocessor operates on code **before** it has been compiled (ie. while it is still at the textual level)

- ◉ True
- ○ False

Question 8

1 / 1 pts

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

- ○ True
- ◉ False

Question 9

1 / 1 pts

What happens when this code fragment runs in C++ 11?

```
cout << stoi("one") << endl;
```

- ○ It sets an error state in `cout`.

- It does not compile.
- None of these
- It compiles, but fails to link
- `stoi()` returns `0`
- It throws a runtime exception

Question 10 — 1 / 1 pts

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

- True
- False

Question 11 — 1 / 1 pts

Assume the `vector` `v` contains `[1, 2, 3]`. `v.erase(0);` is a syntax error.

- True
- False

Question 12 — 1 / 1 pts

The following definition:

```
vector<double> v{3, 5};
```

- None of these
- is a syntax or compiler error
- creates a `vector` of `[5.0, 5.0, 5.0]`
- creates a `vector` of `[3.0, 5.0]`
- creates a `vector` of `[3.0, 3.0, 3.0, 3.0, 3.0]`

Question 13 — 1 / 1 pts

Which statement is false? The elements in a vector:

- are accessed by using an index or subscript
- are homogeneous
- are are all of the same type
- each use the same amount of memory
- None of these

Question 14 — 1 / 1 pts

In C++ the parameterized collection classes are called _____?

- generics
- templates
- abstract data types
- collections
- enumerations
- None of these

Question 15 — 1 / 1 pts

The elements of a `vector` are allocated contiguously.

- True

- False

Question 16

1 / 1 pts

The following code is ***illegal***.

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

- True
- False

Question 17

1 / 1 pts

`vector` subscripts begin at `0` and go up to the `vector size`.

- True
- False

Question 18

1 / 1 pts

What prints?

```
int a[] = {1, 3, 5, 7, 9};
int *p = a;
cout << *p++;
cout << *p << endl;
```

- 33
- 13
- 12
- None of these
- 22

Question 19

1 / 1 pts

C++ arrays throw an ***`out_of_bounds`*** exception if you access an element outside the array.

- True
- False

Question 20

1 / 1 pts

What is a common pointer error?

- Using a pointer without first initializing it
- Dereferencing a pointer
- Assigning a new value to a pointer
- Using indirection on a pointer
- Setting a pointer value to `nullptr`

Question 21

1 / 1 pts

What is true about this code?

```
int * choice;
```

- `choice` can point to any kind of object
- Syntax error; should be `int choice*;`
- `choice` currently points to an integer
- `choice` contains an undefined address
- `choice` currently contains an integer

Question 22

1 / 1 pts

A forward reference can be used when you want to use a structure as a data member without first defining the entire structure.

- ○ True
- ◉ False

Question 23

1 / 1 pts

What is true about this code?

```
int n{500};
int *p = &n;
```

- ○ &p is the direct or explicit value of n
- ○ &n is the indirect value of p
- ○ p stores the same value as n
- ◉ *p is the value of n
- ○ &p represents the indirect value of n

Question 24

1 / 1 pts

Match each item with the correct term below.

Expression using the address operator	p = &a;
Expression using the dereferencing operator	y = *a;
Expression returning the number of allocated bytes used by an object	sizeof(Star)
Address value 0	nullptr

Question 25

1 / 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