Midterm 3 Study Guide

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

Attempt History

	Attempt	Time	Score
KEPT	Attempt 16	30 minutes	24 out of 25
LATEST	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 18 at 9:50pm

Question 1   1 / 1 pts

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

- ⦿ True
- ◯ False

Question 2   1 / 1 pts

The `logic_error` and `runtime_error` classes are defined in the header file _____.

- ◯ `exception`
- ⦿ `stdexcept`
- ◯ `stdlib`
- ◯ `stdex`

Question 3   1 / 1 pts

Functions with generic parameters may use the keyword `class` or the keyword `typename` for their type parameters.

- ⦿ True
- ◯ False

Question 4   1 / 1 pts

What is correct for # 1?

- ◯ `what`

○ if

○ exception&

○ catch

◉ try

○ while

○ None of these

Question 5 0 / 1 pts

What is true about this piece of code?

```cpp
template <typename T, typename U>
T pickle(T& a, const U& b) {
    a += b;
    return b;
}

int main()
{
    int x = 42;
    auto a = pickle(x, 4.5);
    cout << a << endl;
    cout << x << endl;
}
```

☐ This code has a syntax error.

☐ In main, x prints 46.5

☑ In main, a prints 4.5

☐ In main, a prints 4
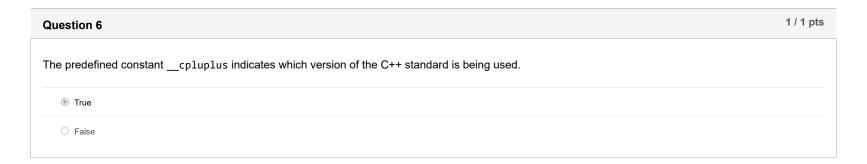
☑ In main, x prints 46

Question 6 1 / 1 pts

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

◉ True

○ False

Question 7 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 8 1 / 1 pts

After writing data to an `ostringstream` object named `os`, you can retrieve the `string` it contains by using:

○ `to_string(os)`

○ `os.to_string()`

○ None of these

◉ `os.str()`

```
○ static_cast<string>(os);
```

Question 9   1 / 1 pts

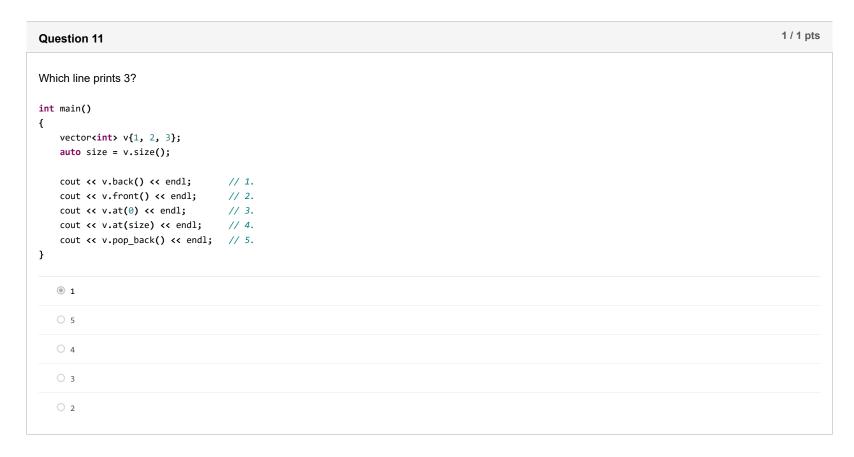In the ***flag-controlled-pattern***, you use Boolean variable to signal when the sentinel is found.

● True

○ False

Partial **Question 10**   0.5 / 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"};
```

☐ lastName

☑ empID

☐ None of these

☑ salary

☑ age

Question 11   1 / 1 pts

Which line prints 3?

```
int main()
{
    vector<int> v{1, 2, 3};
    auto size = v.size();

    cout << v.back() << endl;      // 1.
    cout << v.front() << endl;     // 2.
    cout << v.at(0) << endl;       // 3.
    cout << v.at(size) << endl;    // 4.
    cout << v.pop_back() << endl;  // 5.
}
```

● 1

○ 5

○ 4

○ 3

○ 2

Question 12   1 / 1 pts

Match each item with the correct statement below.

Creates the vector [0]	vector<int> v(1); ▾
Returns a reference to the fourth element in v with no range checking.	v[3]; ▾
Creates the vector [3, 3]	vector<int> v(2, 3); ▾
Adds a new element to the end of v	v.push_back(3); ▾

Question 13   1 / 1 pts

The C++ specific term for a collection of variables that have distinct names and types is a ***record***.

○ True

○ False

Question 14   1 / 1 pts

The `push_back` member function adds elements to the beginning of a `vector`.

○ True

◉ False

Question 15   1 / 1 pts

What prints?

```cpp
void f(vector<int>& v)
{
    v.at(0) = 42;
}
int main()
{
    vector<int> x{1, 2, 3};
    f(x);
    cout << x.at(0) << endl;
}
```

○ Nothing; compile-time error.

○ Nothing; linker error

○ Nothing; run-time error.

○ 1

◉ 42

Question 16   1 / 1 pts

The declaration: `vector<int> v(10);` creates a `vector` object containing uninitialized elements.

○ True

◉ False

Question 17   1 / 1 pts

The following definition:

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

○ is a syntax or compiler error

◉ creates a vector of `[3.0, 5.0]`

○ creates a vector of `[3.0, 3.0, 3.0, 3.0, 3.0]`

○ creates a vector of `[5.0, 5.0, 5.0]`

○ None of these

Question 18   1 / 1 pts

The value for the variable *c* is stored:

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

◉ on the stack

○ on the heap

○ in the static storage area

○ The example does not provide enough information

○ in the CPU machine registers

Question 19   1 / 1 pts

The value for the variable **b** is stored:

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

○ in the CPU machine registers

○ The example does not provide enough information

○ in the static storage area

○ on the heap

◉ on the stack

Question 20   1 / 1 pts

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

◉ True

○ False

Question 21   1 / 1 pts

Assume that **ppi** correctly points to **pi**. Which line prints the **size** (in bytes) of **pi**?

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

○ cout << sizeof(&ppi);

◉ cout << sizeof(*ppi);

○ cout << sizeof(*pi);

○ None of these

○ cout << sizeof(ppi);

Question 22   1 / 1 pts

In C++ printing an array name prints the value of the first element in the array.

○ True

◉ False

Question 23   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

Question 24   1 / 1 pts

The elements of a C++ **int** array with no explicit initialization, created outside a function will be set to zero.

◉ True

○ False

Question 25   1 / 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

◉ True

○ False