Midterm 3 Study Guide

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

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 12	16 minutes	24 out of 25
LATEST	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 5:23pm

Incorrect **Question 1** 0 / 1 pts

The standard library version of `stoi("UB-40")` returns the not-a-number error code.

- (•) True
- ( ) False

Question 2 1 / 1 pts

Match each item with the correct loop form below.

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

Question 3 1 / 1 pts

The standard library version of `stoi("UB-40")` throws a runtime exception because there is no viable conversion.

- (•) True
- ( ) False

Question 4 1 / 1 pts

What happens when you execute the (erroneous) line:

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

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

Incorrect **Question 5** 0 / 1 pts

What is true about this code?

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

int main()
{
    auto x = 42.5;
    auto y = pickle(x, 5);
    cout << x << endl;
    cout << y << endl;
}
```

- ☐ In main, x prints 47
- ☑ In main, x prints 47.5
- ☐ In main, y prints 5
- ☐ No answer text provided.
- ☑ In main, y prints 47.5

Question 6 1 / 1 pts

The standard library version of `sqrt(-2)` throws a runtime exception because there is no possible answer.

- ○ True
- ◉ False

Question 7 1 / 1 pts

The statement `#if abs(-3) > 2` is legal.

- ○ True
- ◉ False

Question 8 1 / 1 pts

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

- ◉ True
- ○ False

Question 9 1 / 1 pts

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

- ○ `stdlib`
- ○ `stdex`

- stdexcept
- exception

Question 10

1 / 1 pts

What is stored in `data` after this runs?

```
vector<int> data{1, 2, 3};
data.front();
```

- None of these
- [1, 2, 3]
- []
- [1, 2, 3, 0]
- [2, 3]
- [1, 2]

Question 11

1 / 1 pts

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

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

- `auto d = cend(v);`
- `auto c = cbegin(v);`
- None of these
- `auto a = begin(v);`
- `auto b = end(v);`

Question 12

1 / 1 pts

Which of the following lines is legal but **undefined**?

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

Coin c;
```

- `c = Coin::QUARTER;`
- `c = QUARTER;`
- `c = static_cast<int>(QUARTER);`
- `c = static_cast<Coin>(.25);`

Question 13

1 / 1 pts

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

```
enum class WEEKEND {SUNDAY, SATURDAY=6};
```

- True
- False

Question 14

1 / 1 pts

What does this code do?

```
int x = 0;
vector<int> v{1, 3, 2};
for (auto e : v) x = e;
cout << x << endl;
```

- Prints 6
- Finds the largest element in v

- [x] Prints 2
- [ ] Sums the elements in v
- [x] Finds the last element in v
- [ ] Prints 0

Incorrect

Question 15

0 / 1 pts

Examine the following code. Which element is erased?

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

- ○ Compiles but no element is erased
- ○ Does not compile
- ◉ 1
- ○ 3
- ○ 2

Question 16

1 / 1 pts

What prints?

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

- ○ 42
- ◉ 1
- ○ Nothing; run-time error.
- ○ Nothing; compile-time error.
- ○ Nothing; linker error

Question 17

1 / 1 pts

Examine the following code. Which element is erased?

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

- ○ 2
- ○ Does not compile
- ◉ All the elements are erased
- ○ 1
- ○ 3

Question 18

1 / 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;`

Question 19

1 / 1 pts

Explicitly initializing an array like this: ***`int a[] = {1, 2, 3};`*** works in all versions of C++.

- (●) True
- ( ) False

Question 20

1 / 1 pts

What is the term used to describe a variable which stores a memory address?

- ( ) `lvalue`
- ( ) None of these
- (●) `pointer`
- ( ) `rvalue`
- ( ) `reference`

Question 21

1 / 1 pts

`[1413]` What does this loop do?

```
int a[] = {6, 1, 9, 5, 1, 2, 3};
int x(0);
for (auto e : a) x += e;
cout << x << endl;
```

- ( ) Has no effect
- ( ) Counts the elements in a
- ( ) Selects the largest value in a
- (●) Sums the elements in a
- ( ) Selects the smallest value in a

Question 22

1 / 1 pts

C++ arrays use bound-checking when you access their elements with the ***`at()`*** member function.

- ( ) True
- (●) False

Question 23

1 / 1 pts

Which line below points ***`ppi`*** to ***`pi`***?

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

- ( ) `*ppi = pi;`
- ( ) `*ppi = &pi;`
- (●) `ppi = &pi;`
- ( ) `ppi& = pi;`
- ( ) None of these

Question 24

1 / 1 pts

You may use any kind of integral variable to specify the size of a built-in C++ array.

- ( ) True
- (●) False

Incorrect

Question 25

0 / 1 pts

The value for the variable ***a*** 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
- on the heap
- on the stack
- in the static storage area