Computing III: Packet 6

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) Exception handling is used to _____. 1) _____

2) C++ signals an error or unusual situation by _____. 2) _____

3) A throw statement passes which type of value to the catch block? 3) _____

4) The catch block is also known as the _____. 4) _____

5) The following catch block catches all _____ exceptions. 5) _____
```
catch ( string e) {  /* catch block code */ }
```

6) If no exception is thrown, then the _____ is ignored. 6) _____

7) The following catch block is known as the _____. 7) _____
```
catch (...) { /* catch block code */  }
```

8) If a function throws an exception and does not catch it, then the function definition and declaration should have _____. 8) _____

9) If a throw list has multiple exceptions listed, they are separated by _____. 9) _____

10) If a function does not have an exception specification, then the function can throw _____ exceptions. 10) _____

11) Can the following function throw any unhandled exceptions? 11) _____
```
void f1( );
```

12) If the following function throws an unhandled exception, what happens? 12) _____
```
void f1( );
```

13) If the following function throws an unhandled exception, what happens? 13) _____
```
void f1( ) throws ( );
```

14) If a function throw list specifies a base class type, then the function may also throw an exception of the _____ class type. 14) _____

15) If some part of your program (or any library functions that are called) throw an exception, then if this exception is not handled in your code, your program will _____. 15) _____

16) In C++, generic algorithms are implemented using _____ templates. 16) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

17) Which of the following is not a valid reason for using exception handling? 17) _____
A) The procedure for handling an error depends on the situation.
B) Throw and catch can be used like gotos.
C) need to handle built in exceptions
D) none of the above

18) The block of code that checks if an unusual situation or error occurs is called 18) _____
A) an error block. B) the try block. C) a function. D) the catch block.

19) The block of code that handles an exception is called 19) _____
A) a function. B) the catch block. C) the try block. D) an error block.

20) When an unusual situation or error occurs, then the _____ statement is executed. 20) _____
A) error B) try C) exiting D) throw

21) A catch block that expects an integer argument will catch 21) _____
A) any exception value that can be coerced into an integer.
B) all exceptions.
C) all integer exceptions.
D) none of the above

22) When a throw statement is executed, 22) _____
A) execution of the try block stops. B) the program always exits.
C) execution of the catch block stops. D) execution of the throw block stops.

23) The parameter in the catch statement 23) _____
A) identifies what type of exceptions are caught.
B) makes the catch block a function.
C) must always be an e.
D) identifies the different number of exceptions that can be caught.

24) The throw statement is enclosed in 24) _____
A) a catch block. B) a try block. C) a throw block. D) quotes.

25) A throw statement can throw 25) _____
A) an exception of any data type.
B) an integer exception.
C) a float exception.
D) a bool exception.
E) all of the above

26) The following catch statement: 26) _____

```
catch(...) { /* catch block code */ }
```

A) catches only numeric exceptions.
B) should be the first catch block if multiple catch statements are present.
C) is illegal.
D) catches all exceptions.

27) The following class definition 27) _____

```
class MyError { };
```

A) has only a default constructor.
B) is illegal.
C) has no member functions or member data.
D) A and B

28) If a function throws an exception, 28) _____
A) it causes a syntax error.
B) it must be caught in that function.
C) it may be caught in that function.
D) it can only be a non-numeric exception.

29) If you have a function that might throw an exception and some programs that use that function might want to handle that exception differently, you should 29) _____
A) throw an integer exception.
B) not catch the exception in the function.
C) never throw an exception in this function.
D) none of the above

30) If the following function will throw a string exception, then which is true? 30) _____

```
void myFunction( );
```

A) the function definition and declaration should have a throw list.
B) the function should have an empty throw list.
C) the function definition, but not the declaration, should have a throw list.
D) all of the above

31) Which of the following function declaration correctly specifies that two types of exceptions are thrown? 31) _____
A) void f1( ) throw a, throw b;
B) void f1( ) throw (a,b);
C) void f1(exception a, exception b);
D) void f1( ) exception (a;b);

32) Given the following function definition, what happens if the function throws the exception? 32) _____

```
void f1( ) throw (double)
{
   if( /* some code here */ )
      throw 12;
}
```

A) This code has a syntax error.
B) The 12 will be converted to 12.0.
C) The function will cause the program to exit.
D) The function will throw an integer exception which is passed to the calling code.

33) If a function will possibly throw an unhandled exception, the try block should 33) _____
A) encompass the function call.
B) not be used.
C) be in the function definition.
D) be in the catch block.

34) If class A is derived from class B, and a virtual function in class B throws an exception, then the overridden version of that function in class A must 34) _____
A) not throw any exceptions.
B) not throw any exceptions that the function in class B might throw.
C) have an exception specification that is a subset of the exception specification of the base class B.
D) all of the above

35) Which type of exception is thrown if a call to the `new` operator fails? 35) _____
A) MemoryError B) DivideByZero
C) bad_alloc D) ArithmeticError

36) What is the return type of the `minmax_element` generic algorithm? 36) _____
A) pair B) iterator C) T (generic type) D) bool

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

37) The following function does not throw any unhandled exceptions. 37) _____
```
void f1( ) throw ( );
```

38) Functions that might throw an exception must have a throw list. 38) _____

39) Functions may potentially throw at most one exception. 39) _____

40) If a function throws an exception, it must be caught inside that function. 40) _____

41) It is legal to have a catch block with no parameter. 41) _____

42) In a try block, the throw statement is always executed. 42) _____

43) The catch block is a function. 43) _____

44) The braces are not necessary to enclose a try block. 44) _____

45) The throw statement passes a value to the catch block. 45) _____

46) The catch block is a group of statements that handle an exception. 46) _____

47) The Standard Template Library (STL) consists of container classes of various kinds. 47) _____

48) In the STL, iterators provide the "glue" connecting container classes and generic algorithms. 48) _____

49) The model for the iterator in the STL was the pointer. 49) _____

50) None of the STL algorithms modifies the sequence of elements in any possible containers. 50) _____