1. What is true about a reference?

A. We can have a reference to a pointer

B. We can have a reference to a reference

C. We can have a pointer to a reference

D. We can have an array of references

2. Modularity is the benefit of _____characteristic of OOPs

A. Polymorphism

B. Encapsulation

C. Inheritance

D. All of the above

3. The global object's constructor function is executed

A. as soon as object is created but after execution of main()

B. before main() is executed

C. in main() i.e. when main() is executing

D. in the reverse order of declaration

4. A state of an object may contain ____

A. primitive data type only

B. object of another class

C. A as well as B

D. None of the above

5. Which of the following statements are true regarding files and modes?

A. The ios::ate allows us to write data anywhere in the file

B. We can add data to an existing file by opening it in the append mode

C. ios::out opens file for reading as well as writing to the file

D. All of the above

6. The associative container stores

A. alphabetic or numerically stored values

B. keys in sorted order

C. iterators in sorted order

D. none of the above

7. The private data of a class accessed by a friend function

A. is in the object that invoked the friend

B. is in the object created by the friend function

C. is in the object of different class

D. is in the object sent to the friend function as argument

8. Can we declare pointer to a pointer in C++

A. yes

B. no

C. not in case of float

D. depends on the compiler

9. Which operator can not be overloaded?

(A) +

(B) -

(C) *

(D) ::

10. Which operator has more precedance in below list?

A) +

(B) -

(C) ++

(D) *

11.

```
void Execute(int &x, int y = 200)
{
 int TEMP = x + y;
 x+= TEMP;
 if(y!=200)
    cout<<TEMP<<x<<y"--";
}

int main()
{
 int A=50, B=20;
 cout<<A<<B<<"--";
 Execute(A,B);
 cout<<A<<B<<"--";
 return 0;
}
```

(A) 5020--5020--
(B) 5020--7012020--12020--
(C) 5020--70120200--5020
(D) 5020--7050200--5020--

12.

```
class base
{
public:
      base()
      {
         cout<<"BCon";
      }
      ~base()
      {
              cout<<"BDest ";
      }
};
class derived: public base
{
public:
      derived()
      {    cout<<"DCon ";
      }
      ~derived()
      {    cout<<"DDest ";
      }
};



int main()
{
derived object;
return 0;
}
```

(A) Dcon DDest
(B) Dcon DDest BCon BDest
(C) BCon DCon DDest BDest
(D) BCon DCon BDes DDest

13.
What should be the output?

```
int main() {
   int new = -10;
```

```
    cout<<"new is: "<<new;
    return 0;
}
```

(A) new is: -10
(B) new is: 10
(C) Compilation Error
(D) new is: 0

14.
When Virtual Table is created?

(A) Every Class has VTable
(B) Class inherited from other Class
(C) When a Class Overrides the function of Base class
(D) Class has atleast one Virtual Function

15.
What is abstract class?
A) A class with abstract keyword
(B) A class with no functions in it
(C) A class with atleast one pure virtual function
(D) Empty Class

16. What is the size of empty class?
(A) 0
(B) 1
(C) 2
(D) 4

17. When can we have two classes with same name?
(A) We cant have
(B) In different work space
(C) Can have but in different file
(D) We can have in any scenario

18. Exceptions are Caught at ?
(A) Compilation Time
(B) Run Time
(C) Linking Time
(D) No

19. Can we create object of Abstract class?
(A) Yes
(B) No

20. Can we create pointer to Abstract class?
(A) Yes
(B) No

21. What is VTable?
(A) It contains VPTR
(B) It contains address of Virtual function
(C) It cotains address of Object
(D) None of these

22. What is dangling pointer?
(A) A pointer pointing to NULL
(B) Pointer pointing to memory location which has been freed
(C) Pointer which is pointing to new location
(D) None of these

23. Can we have Virtual Destructor ?
(A) Yes
(B) No

24. Is it mandatory to override virtual function in Derived class?
(A) Yes
(B) No

25. If a class(has one virtual function) has 5 Objects then how many Vtable it will have?
(A) 5
(B) 1
(C) 0
(D) Depends on Compiler

26. Can we have constructor as Virtual?
(A) Yes
(B) No

27. Which Exception is thrown when new fails to allocate memory?
(A) std::exception
(B) std::bad_alloc
(C) std::runtime_error
(D) std::out_of_range

28. Which exception is thrown when dynamic_cast fails?
(A) std::bad_typeid
(B) std::logic_error
(C) std::runtime_error
(D) std::bad_cast

29. Which is the Parent class for all exceptions?
(A) std::bad_exception
(B) std::logic_error
(C) std::exception
(D) std::runtime_error

28. Which part of memory is used for the allocation of local variables declared inside any function.
(A) Heap
(B) Stack
(C) Address Space
(D) Depends on Compiler

30. Car contains Engine. Which type of relationship is it?
(A) IS-A relation
(B) HAS-A relation
(C) None of these

31. Which of the following is the least safe type casting in C++?
(A) static_cast
(B) const_cast
(C) reinterpret_cast
(D) dynamic_cast

32. Which of the following is not a type of constructor?

A. Copy constructor
B. Friend constructor
C. Default constructor
D. Parameterized constructor

33.Which of the following statements is correct?

A. Base class pointer cannot point to derived class.
B. Derived class pointer cannot point to base class.
C. Pointer to derived class cannot be created.
D. Pointer to base class cannot be created.

34. Which of the following is not the member of class?

A. Static function
B. Friend function
C. Const function

D. Virtual function

35. Which of the following concepts means determining at runtime what method to invoke?

A. Data hiding

B. Dynamic Typing

C. Dynamic binding

D. Dynamic loading

36. Which of the following concept of oops allows compiler to insert arguments in a function call if it is not specified?

A. Call by value

B. Call by reference

C. Default arguments

D. Call by pointer

37. How many instances of an abstract class can be created?

A. 1

B. 5

C. 13

D. 0

38. Which of the following is correct about function overloading?

A. The types of arguments are different.

B. The order of argument is different.

C. The number of argument is same.

D. Both A and B.

39. Which of the following concepts means wrapping up of data and functions together?

A. Abstraction

B. Encapsulation

C. Inheritance

D. Polymorphism

40. How "Late binding" is implemented in C++?

A. Using C++ tables

B. Using Virtual tables

C. Using Indexed virtual tables

D. Using polymorphic tables

41. Functions called from within a try block may also throw exception.

a. True

b. False

42. A class can contain objects of other classes and this phenomenon is called_____ .

a. Relationship

b. Object Association

c. Containership

d. None of these

43. If a class contains pure virtual function, then it is termed as_____ .

a. Virtual class

b. Sealed class

c. Pure Local class

d. Abstract Class

44. If inner catch handler is not able to handle the exception then_____ .

a. Compiler will look for outer try handler

b. Program terminates abnormally

c. Compiler will check for appropriate catch handler of outer try block

d. None of these

45. Generic catch handler is represented by _____ .

a. catch(..,)

b. catch(---)

c. catch(…)

d. catch(void x)

46. Private members of the class are not inheritable.

a. True

b. False

47. While overloading binary operators using member function, it requires ___ argument/s.

a. Zero

b. **One**

c. Two

d. Three

48. If abstract class is inherited by derived class, then_____ .

a. Derived class should provide definition for all the pure virtual functions

b. Derived class also become abstract if fails to implement pure virtual functions

c. Objects of derived class can't be created if it fails to implement pure virtual functions

d. **All of these**

49. By default, all the files are opened in _____mode .

a. Binary

b. Text

c. Can't say

50. Generic catch handler must be placed at the end of all the catch handlers.

a. True

b. False

51. Can a class be declared/defined inside another class ?

a. **Yes**

b. No

52. Irrespective of exception occurrence, catch handler will always get executed.

a. True

b. False

53. Constant variables can be created in CPP by using _____ .

a. enum

b. const

c. #define

d. **All of these**

e. None of these

54. It is not possible to combine two or more file opening mode in open () method.

a. True

b. **False**

55. Object oriented programming employs_____ programming approach.

a. top-down

b. procedural

c. bottom-up
d. all of these.

56. Only functions of the class can access the data of the class and they(functions) provides the interface between data, objects and the program. This kind isolation of the data from direct access by the program is called _____ .
a. Data Abstraction
b. Data Hiding
c. Data Binding
d. Data Encapsulation

57. We can initialize a value of static variable of a class only when its object is created. No other initialization is permitted.
a. True
b. False

58. What is the difference between protected and private access specifiers in inheritance?
a. private member is not inheritable and not accessible in derived class.
b. protected member is inheritable and also accessible in derived class.
c. Both are inheritable but private is accessible in the derived class.
d. Both are inheritable but protected is not accessible in the derived class.

59. A friend function does not have 'this' pointer associated with it.
a. True
b. False

60. Throwing an unhandled exception causes standard library function then _____ to be invoked.
a. stop()
b. aborted()
c. terminate()
d. Abandon()

61. Due to ios::trunc mode, the file is truncated to zero length.
a. True
b. False

62. Return type of uncaught_exception() is _____ .
a. int
b. bool
c. char *
d. double

63. Default values for a function are specified when ____ .
a. function is defined

b. function is declared
c. Both a and b
d. None of these

64. Can member functions of one class be friend functions of another class?
a. Yes
b. No

65. Predict the output:
float x= 3.1496;
cout << setpricision(2) << x;
a. 3.14
b. 3.15
c. 3.00
d. None of these

66. In case of binary operator overloading with member function, which of following statement should be taken into consideration?
a. Right hand operand must be object.
b. Left hand operand must be object.
c. Both the operands must be objects.
d. All of these should be considered.

67. Which of the following is not a casting operator in CPP?
a. explicit_cast
b. static_cast
c. dynamic_cast
d. reinterpret_cast

68. While redefining a virtual function in the derived class, if its prototype is changed then _____ .
a. It will be overloaded by the compiler
b. Its virtual nature will be lost
c. both a and b
d. Compiler will generate "Prototype mismatch error"

69. Attempting to throw an exception that is not supported by a function call results in calling _____ library function.
a. indeterminate()
b. unutilized()
c. unexpected()
d. unpredicted()

70. In case of operator overloading, operator function must be _____ .

1. Static member functions

2. Non- static member functions

3. Friend Functions

a. Only 2

b. Only 1, 3

c. **Only 2 , 3**

d. All 1 , 2, 3

71. Assume class TEST. Which of the following statements is/are responsible to invoke copy constructor?

a. TEST T2(T1)

b. TEST T4 = T1

c. T2 = T1

d. **both a and b**

e. All of these

72. Runtime polymorphism is achieved only when a virtual function is accessed through a pointer to the base class.

a. **True**

b. False

73. Assigning one or more function body to the same name is called _____ .

a. Function Overriding

b. **Function Overloading**

c. Both a and b

d. None of the above

74. Which of the following statements are not true about destructor?

1. It is invoked when object goes out of the scope

2. Like constructor, it can also have parameters

3. It can be virtual

4. It can be declared in private section

5. It bears same name as that of the class and precedes Lambda sign.

a. Only 2, 3, 5

b. Only 2, 3, 4

c. **Only 2, 4, 5**

d. Only 3, 4, 5

75. Using friend operator function, following perfect set of operators may not be overloaded.

a. = , ( ) , [ ] , ->

b. <<, = = , [ ] , >>

c. ?, = , ( ) , ++

d. None of these

76. If the derived class is struct, then default visibility mode is _____ .

a. public

b. protected

c. private

d. struct can't inherit class

77. In OOP languages, all of the processing and functionality has been moved to

A. the objects

B. the classes

C. class members

D. all of the above

78. What term in procedural languages corresponds closely with classes in OOPs?

A. variable

B. function

C. system defined data type

D. user defined data type

79. What is the main purpose of creating an abstract base class ?

A. creating the dynamic object

B. dynamic binding

C. deriving classes

D. none of these

80. Object is

A. collection of classes

B. collection of members

C. instance of class

D. similar to classes

81. inheritance is useful for producing a software, which is

A. instantaneous

B. unpredictable

C. reusable

D. none of these

82. A metaclass is a class

A. whose instances themselves are classes

B. in which instance created will itself be a class

C. A and B

D. None of the above

83. The size of the object of the class is

A. Sum of sizes of its data and function members

B. size of its largest data member

C. size of its largest function member

D. sum of sizes of its data members

84. Is implementation of virtual function is efficient to achieve a goal as compared with implementation of non-virtual function?

A. Depends upon implementation

B. It is efficient

C. Depends upon stack availability

D. It is not efficient

85. Polymorphism means

A. one class, multiple methods

B. multiple classes, multiple methods

C. one interface, multiple methods

D. multiple interfaces, multiple methods

86. Default arguments can be used to _____

A. pass parameters to another function

B. increase execution speed

C. Reduce memory requirement

D. None of these

87. A dangling pointer is one

A. which arises when you use the address of an object after its lifetime is over

B. which may occur in situations like returning addresses of the automatic variables from a function or using the address of the memory block after it is freed

C. Option 1 and Option 2

D. None of the above

88. If a class is having two or more members of types of another classes, the relationship is called as _____

A. has – a relationship

B. is – a relationship

C. kind of relationship

D. part-of relationship

89. What is the meaning of the statement. const Hello *p;

A. p is a pointer to an object of class Hello that can modify the contents of object

B. p is a pointer to an object of class Hello that can access const member functions of object

C. p is a pointer to an object of class Hello that can access static member functions of object

D. p is a pointer to an object of class Hello that can access any member of object

90. Inheritance in OOPs represents _____

A. a view from big to small

B. a view from generic to specific

C. A and B

D. none of the above

91. After successful memory allocation, new returns _____

A. NULL

B. Zero

C. void

D. None of these

92. **When a derived class fails to override a virtual function, then**

A. The first redefinition found in reverse order of derivation is used

B. If the object of the derived class accesses that function, the function defined by the base class is used

C. Both, 1 and 2 are true

D. Both, 1 and 2 are false

93. Virtual functions ____

A. Must be friend of the base class

B. Must be static member of the base class which must be defined

C. Must be non-static member of the base class which must be defined

D. Must be static member of the base class which need not be defined

94. What is true about virtual functions?

A. Can be called from constructors but not from destructors

B. Can be called from destructors but not from constructors

C. Cannot be called from either constructors or from destructors

D. Can be called from both constructors and destructors

94. What is true in case of virtual function?

A. A virtual function in base class must be defined, even though it may not be used

B. Static member functions can be made virtual

C. We cannot have virtual destructors

D. A virtual function cannot be a friend of another class

95. A derived class inherits every member of a base class except

A. its constructors and destructors

B. its operator = () members

C. its friends

D. all of the above

96. Static members of a class

A. means class variable

B. have the same properties as that of global variables but having class scope

C. A and B

D. A or B

97. Which statement is true in case of a destructor?

A. A destructor can be overloaded

B. A destructor has to be called explicitly

C. A destructor does not return any value

D. A destructor can have parameters

98. Overloading of which operator will be similar to invoking a copy constructor?

A. +

B. . (dot)

C. =

D. ~ (tilde)

99. In which of the following cases is a copy constructor invoked?

A. When a new object of a class is initialized with the existing object of that class

B. When a copy of an object is passed by value as an argument to a function

C. When you return an object of the class by value

D. All of the above

100. When does dynamic binding occur?

A. During construction

B. During compilation

C. During linking

D. During execution

101. Overriding causes _____

A. base class function to be called

B. derived class function to be called

C. a virtual function to be called

D. first base class then derived class function to be called

102. With which of the following streams is the keyboard device associated by default?

A. cerr

B. clog

C. cin

D. cout

103. What is true about a virtual base class?

A. Constructors for virtual base classes are invoked before any non-virtual base classes
B. A class whose constructors have parameters can be a virtual base class
C. Only one copy of the class is inherited by the next generation class
D. All of the above are true

104. Static member functions _____

A. can be used without an instantiation of an object
B. Can only access static data
C. A and B
D. Neither A nor B

105. Which of the following statements have errors?

A. cout.width(10).precision(3);
B. cout << resetiosflags(ios::left,ios::showpoint);
C. cout << put("siit");
D. All of the above statements have errors

106. this pointer _____

A. addresses the class object for which the member function is called
B. points to addresses of member function
C. pointes to class object
D. none of the above

107. The inline specifier _____

A. Does not change the behavior of a function
B. Tells the compiler to make a use of a stack for calling a function
C. 1 and 2
D. None of the above

108. C++ is developed by

A. Dennis Ritchie
B. Bjarne Stroustrup
C. Herbert Schitz
D. Bjarne Borg

109. The :: is called

A. double dot
B. four sqr
C. delimiter
D. scope resolution operator

110. Iterators are

A. pointer like entities used to access elements in a container
B. linked list structures
C. stacked pointers in vector map
D. None of the above

111. volatile qualifier indicates that memory location

A. can be altered
B. cannot be altered
C. will not be allocated
D. will disappear

112. Data member of a class can be qualified as static

A. True
B. False

C. Only static friends

D. Only void static

113. The private data of a class accessed by a friend function

A. is in the object that invoked the friend

B. is in the object created by the friend function

C. is in the object of different class

D. is in the object sent to the friend function as argument

114. The use of delete is to

A. Only deallocate the memory allocated by new

B. Deallocate the memory allocated by new and call the class destructor

C. Call the destructor of that class whose object is to be destroyed

D. None of the above

115. Character constants and string constants are same representation

A. Characters can have numbers but string constants do not

B. Strings are nothing but character array

C. False

D. True

116. What is the main purpose of creating an abstract base class ?

A. creating the dynamic object

B. dynamic binding

C. deriving classes

D. none of these

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C. size of its largest function member

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B. If the object of the derived class accesses that function, the function defined by the base class is used

C. Both, 1 and 2 are true

D. Both, 1 and 2 are false

120. In C++, a function contained within a class is called _____

A. a member function

B. an operator

C. a class function

D. a method

121. Anonymous union means

A. a union having no member

B. a union having no tag name

C. a union having only one object

D. none of the above

122. If a class D is derived from class A and class B is derived from class D, then it is called as

A. multitple
B. hierarchical
C. muli-level
D. single

123. Variables are to data types as

A. members are to classes
B. data items are to classes
C. objects are to classes
D. data is to a variable

124. In inheritance _____

A. it doesn't work in reverse
B. the base class and its objects have no knowledge about any classes derived from the base class
C. A and B
D. none of the above

125. The idea behind virtual functions is to _____ the derived class object's address into a pointer to a base class object

A. downcast
B. upcast
C. modify
D. none of the above