1. Which allows you to create a derived class that inherits properties from more than one base class?
   a. Multilevel inheritance
   b. Multiple inheritance
   c. Hybrid inheritance
   d. Hierarchical inheritance
2. What does C++ append to the end of a string literal constant?
   a. A space
   b. A number sign(#)
   c. An asterisk(*)
   d. A null character
3. An array element is accessed using
   a. A first-in-first-out approach
   b. The dot operator
   c. A member name
   d. An index number
4. Null character needs a space of
   a. Zero bytes
   b. One byte
   c. Three bytes
   d. Four bytes
5. The argument that determine the state of the cout object are called
   a. Classes
   b. Manipulators
   c. Format flags or state flags
   d. State controllers
6. The standard input stream, which refers to the keyboard, is called
   a. cin
   b. cout
   c. stin
   d. stout
7. The body of a C++ function is surrounded by
   a. Parenthesis
   b. Angle brackets
   c. Curly braces
   d. Square brackets
8. You must specify void in parameters if a function does not have arguments.
   a. True
   b. False
9. Which feature in OOP allows reusing code?

a. Polymorphism
b. Inheritance
c. Encapsulation
d. Data Hiding

10.   If the class name is X, what is the type of its "this" pointer (in a nonstatic, non-const member function)?
   a. Const X* const
   b. X* const
   c. X*
   d. **X&**

11.   Which one of the following is not a fundamental data type in C++
   a. float
   b. string
   c. int
   d. wchar_t

12.   Which one of the following is the valid destructor of the class name "Country"
   a. int ~Country()
   b. ~Country()
   c. int ~Country(Country obj)
   d. void ~Country()

13.   What's wrong? for(int k=2, k<=12, k++)
   a. The increment should always be ++k
   b. The variable must always be the letter I when using a for loop
   c. There should be a semicolon at the end of the statement
   d. The commas should be semicolons

14.   Which one of the following is not a valid reserved keyword in C++
   a. Protected
   b. Public
   c. Implicit
   d. Private

15.   Each pass through a loop is called a/an
   a. Enumeration
   b. Iteration
   c. Culmination
   d. Pass through

16.   Which of the following statement is correct?
   a. A constructor is called at the time of declaration of an object.

b. A constructor is called at the time of use of an object.

c. A constructor is called at the time of declaration of a class.

d. A constructor is called at the time of use of a class.

17. Which of the following keyword supports dynamic method resolution?
   a. **Abstract**
   b. Virtual
   c. Dynamic
   d. Typeid

18. What's wrong? while((i<10) && (i>24))
   a. The logical operator && cannot be used in a test condition
   b. The while loop is an exit-controlled loop
   c. The test condition is always false
   d. **The test condition is always true**

19. What's wrong? (x=4 && y=5)? (a=5) ; (b=6);
   a. The question mark should be an equal sign
   b. The first semicolon should be a colon
   c. There are too many variables in the statement
   d. **The conditional operator is only used with apstrings**

20. If class A is friend of class B and if class B is friend of class C, which of the following is true?
   a. Class C is friend of class A
   b. **Class A is friend of class C**
   c. Class A and class C do not have any friend relationship
   d. None of the above

21. A direct access file is:
   a. A file in which records are arranged in a way they are inserted in a file
   b. A file in which records are arranged in a particular order
   c. **Files which are stored on a direct access storage medium**
   d. None of the above

22. Seek time is
   a. Time taken to retrieve a data
   b. Time taken by read/write head mechanism to position itself over appropriate cylinder
   c. Time taken by appropriate sector to come under read/write
   d. **None of the above**

24 A class's _____ is called when an object is destroyed.
   A. constructor
   B. **destructor**

C. assignment function

D. copy constructor

No memory is allocated for static members of a class

25 Which looping process checks the test condition at the end of the loop?

a. for

b. while

c. do-while

d. no looping process checks the test condition at the end

23.   The default access modifier assigned to members of a class is---------

a. Private

b. Public

c. Protected

d. Needs to be assigned

24.   *ptr++ is equivalent to:

a. ptr++

b. *ptr

c. ++*ptr

d. None of the above

25.   Which of the following language is not supported by C++?

a. Exception handling

b. Reflection

c. Operator overloading

d. Namespaces

26.   Class derived: public base1, public base2 { } is an example of

a. Single inheritance

b. Multilevel inheritance

c. Hierarchical inheritance

d. Multiple inheritance

27.   Which of the following is not a file operation:

a. Reposition

b. Truncating

c. Appending

d. None of above

28.   How do we declare an abstract class?

a. By providing at least one pure virtual method(function signature followed by==0;) in a class

b. By declaring at least one method abstract using the keyword 'abstract' in a class

c. By declaring in the class abstract with the keyword 'abstract'

    d. It is not possible to create abstract classes in C++

29.   Expression c=i++ causes
    a. Value of i assigned to c and then i incremented by 1
    b. i to be incremented by 1 and then value of i assigned to c
    c. Value of i assigned to c
    d. i to be incremented by 1

30.   The statement i++ is equivalent to
    a. i=i+i;
    b. i=i+1;
    c. i=i-1;
    d. i--;

31.   How do we define a constructor?
    a. X~(){}
    b. X(){}
    c. X()~{}
    d. ~X(){}

32.   When class B is inherited from class A, what is the order in which the constructors of those classes are called
    a. Class A first class B next
    b. Class B first class A next
    c. Class B's only as it is the child class
    d. Class A's only as it is the parent class

33.   In a group of nested loops, which loop is executed the most number of times?
    a. The outermost loop
    b. The innermost loop
    c. All loops are executed the same number of times
    d. Cannot be determined without knowing the size of the loops

34.   Inline functions are invoked at the time of
    a. Run time
    b. Compile time
    c. Depends on how it is invoked
    d. Both b and c above

35.   What defines a general set of operations that will be applied to various types of data?
    A. Template class
    B. Function template
    C. Class template
    D. Both b and c above

36.   Under which of the following circumstances, synchronization takes place?

a. When the file is closed

b. When the buffer is empty

c. Explicitly, with manipulators

d. Both a and c

37.   Which of the following members do get inherited but become private members in child class

a. Public

b. Private

c. Protected

d. All the above

38.   Which looping process is best known when the number of iterations are known?

a. For

b. While

c. Do-while

d. All looping process require that the iterations be known

39.   Which of the following is the most common way of implementing c++?

a. C++ programs are directly compiled into native code by a compiler

b. C++ programs are first compiled to intermediate code by a compiler and then executed by a virtual machine

c. C++ programs are interpreted by an interpreter

d. C++ editor directly compiles and executes the program

40.   Which of the following operators can be overloaded?

a. –(unary minus)

b. &(address-of-operator)

c. sizeof operator

d. ?:(conditional operator)

41.   Which of the following operator cannot be overloaded?

a. ?:(conditional operator)

b. ==(equality operator)

c. ->(row operator)

d. ?

42.   Which of the following operators below allow to define the member functions of a class outside the class?

a. ::

b. ?

c. :?

d. %

43.   Minimum number of temporary variable needed to swap the contents of 2 variables is:
   a. 1
   b. 2
   c. 3
   d. 0

44.   There is nothing like a virtual constructor of a class
   a. False
   b. True

45.   C++ provides facility to specify that the compiler should match function calls with the correct definition at the run time. This process is called as
   a. Static binding
   b. Dynamic binding

46.   The output of this program is
```
int main()
  {
    cout<<"Hello World!";
    return 0;
  }
```
   a. Hello World
   b. Syntax error
   c. 0
   d. Hello World!

47.   Destructors typically
   a. Deallocate system resources
   b. Initialize instance variables
   c. Return zero if all went well
   d. None of these

48.   What will be the output of the following code?
```
void main()
  {
    int n=-1;
   for(--n;n<2;n++)
   cout<<n;
  }
```
   a. -2-101
   b. -202
   c. 2-101
   d. 2101

49.   Consider the following statements, what are the values of a,b and c respectively?
int a=2,b=3,c=4;
a=(b++)+c;
b=a+(++c);
a. 8,12,5
b. 8,13,5
c. 7,11,5
d. 7,12,5

50.   A class cannot have more than one destructor.
a. True
b. False

51.   A constructor having a reference to an instance of its own class as argument is known as
a. Copy constructor
b. Parameterized constructor
c. Default constructor
d. Default argument constructor

52.   Constructors can return value
a. True
b. False

53.   The strings str1 and str2 are combined using
a. strcat(str1,str2);
b. strcpy(str1,str2);
c. strlen(str2);
d. strcmp(str1,str2);

54.   The ternary operator can be overloaded
a. True
b. False

55.   The technique of building new classes from the existing classes is called……
a. Polymorphism
b. Data hiding
c. Inheritance
d. Encapsulation

56.   A derived class inherits data members and member functions, but not the constructor or destructor of its base class.
a. True
b. False

57.   If the same member(data/function) exists in both the base class and the derived class, the member in the derived class will be executed.
   a. True
   b. False
58.   The form of inheritance which derives a new class by multiple inheritance of base classes, which are derived earlier from the same base class, is known as multipath inheritance.
   a. True
   b. False
59.   Benefits of reusable code include increased reliability and a decreased maintenance cost because of sharing of the code by all its users.
   a. True
   b. False
60.   A pure virtual member function can be invoked by its derived class.
   a. True
   b. False
61.   The template declared for functions are called class templates.
   a. True
   b. False
62.   The syntax for function template instantiation is:
   className <char> object1;
   a. True
   b. False
63.   istream does formatted output.
   a. True
   b. False
64.   setw(int width) sets the field width.
   a. True
   b. False
65.   Which of the following sets the fill character.
   a. setw()
   b. setprecision()
   c. setfill()
   d. endl
66.   setprecision() sets the precision used for floating point output.
   a. True
   b. False
67.   What is the output of the following?

```
void main()
  {
      float f1=123.45, f2=34.65;
      cout<<setw(6)<<f1<<endl;
  }
```

a. 123.45
b. 1234.5
c. 12.345
d. 1.2345

68.　　The declaration for the classes ifstream, ofstream and fstream exists in which header files
a. ctype.h
b. fstream.h
c. string.h
d. iostream.h

69.　　Mode specifies the pathname of the file to be opened..
a. True
b. false

70.　　Which mode of file is used to seek to the end of file at opening time.
a. ios :: in
b. ios :: out
c. ios :: ate
d. ios :: trunk

71.　　Opening the file in ios::out mode also opens it in the ios::trunc mode by default.
a. True
b. False

72.　　The mode ios::app can be used only with input files.
a. True
b. False

73.　　Which of the following returns the current position of the get pointer.
a. seekg()
b. seekp()
c. tellg()
d. tellp()

74.　　Which property of C++ allows association of data functions into a single unit.
a. Inheritance
b. Polymorphism

c. Data hiding

d. encapsulation

75.   To obtain the address of a program variable we use

a. Dot operator

b. Address operator

c. * (asterisk)

d. # (hash)

76.   A function that contains a function call to itself is called friend function.

a. True

b. False

77.   Assigning one or more function body to the same name is known as

a. Function overloading

b. Operator overloading

c. Function templates

d. Class templates

78.   Functions cannot return value.

a. True

b. False

79.   The process of splitting a large program into small one is called

a. Structure

b. Functions

c. Inheritance

d. Polymorphism

80.   The output of

```
{
int a = 5;
int b = 10;
cout << (a>b?a:b);
}
```

a. 5

b. 10

c. Syntax error

d. None of above

81. The output of this program is

```
int a = 10;
void main()
{
```

```
    int a = 20;
     cout << a << ::a;
     }
```

a. Syntax error
b. 10 20
c. 20 10
d. 20 20

82. Which of the following keyword is used to overload an operator?

   a. Overload
   b. operator
   c. friend
   d. override

83. Which inheritance type is used in the class given below?
class A : public X, public Y{}

   a. Multilevel inheritance
   b. Multiple inheritance
   c. Hybrid inheritance
   d. Hierarchical Inheritance

84. Which one of the following is correct about the statements given below?

   1. All function calls are resolved at compile-time in Procedure Oriented Programming.
   2. All function calls are resolved at compile-time in OOPS.

   a. Only II is correct.
   b. Both I and II are correct.
   c. Only I is correct.
   d. Both I and II are incorrect.

85. Which one of the following is the correct way to declare a pure virtual function?

   a. virtual void Display(void){0};
   b. virtual void Display = 0;
   c. virtual void Display(void) = 0;
   d. void Display(void) = 0;

86. Which of the following header file includes definition of cin and cout?

   a. istream.h
   b. ostream.h
   c. iomanip.h
   d. iostream.h

87. Which of the following are available only in the class hierarchy chain?

a. Public data members
b. Private data members
c. Protected data members
d. Member functions

88. Which of the following ways are legal to access a class data member using this pointer?

a. this->x
b. this.x
c. *this.x
d. *this-x

89. Which one of the following options is correct about the statement given below? The compiler checks the type of reference in the object and not the type of object.

a. Inheritance
b. Polymorphism
c. Abstraction
d. Encapsulation

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

a. Abstraction
b. Encapsulation
c. Inheritance
d. Polymorphism

91. 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.

92. Which of the following is false for switch statement in C++?
a.   It uses labels instead of blocks
b.   we need to put break statement at the end of the group of statement of a condition
c.   we can put range for case such as case 1..3
d.   None of above

93. Is there any difference int the following declarations? int fun(int arr[]); int fun(int arr[2]);
a. Yes
b. No

94. Are the expressions arr and &arr same for an array of 10 integers?
a. Yes
b. **No**

95.The keyword used to transfer control from a function back to the calling function is

    a. switch

    b. goto

    c. go back

    d. **return**

96. The standard input stream, which refers to the keyboard, is called

    a. **cin**

    b. cout

    c. stin

    d. stout

97. Elements in an array are identified by a unique _____

    a. data type

    b. order

    c. **subscript**

    d. symbol

98. Which of the following is a string literal constant?

    a. "Visual C++"

    b. "137.45"

    c. "A"

    d. All of the above