Questions

1. What is the difference between an array and a vector in C++?
a) Arrays are fixed size while vectors can be resized
b) Arrays can only store integers while vectors can store any data type
c) Arrays are more efficient than vectors
d) There is no difference between an array and a vector
2. What is the output of the following code snippet?

```
int i = 1;
while (i < 10) {
 i++;
 if (i == 5) continue;
 cout << i << " ";
}
```

a) 2 3 4 6 7 8 9 10
b) 1 2 3 4 5 6 7 8 9 10
c) 1 2 3 4 6 7 8 9 10
d) 1 2 3 4 5 6 7 8 9
3. Which of the following is not a valid C++ data type?
a) long long
b) double float
c) char
d) bool
4. What is the output of the following code snippet?

```
int nums[] = {1, 2, 3};
cout << nums[1] << " " << *(nums + 1) << endl;
```

a) 1 2
b) 2 1
c) 2 3
d) 3 2
5. Which of the following statements about references in C++ is true?
a) A reference is a variable that refers to the memory location of another variable.
b) A reference can be null.
c) A reference can be reassigned to refer to a different object.
d) A reference can be used to create a copy of an object.
6. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
 int a = 10, b = 5;
 cout << (a > b ? "a is greater" : "b is greater");
 return 0;
```

}
a) a is greater
b) b is greater
c) Error
d) None of the above

7. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
 int x = 10;
 int y = x++;
 cout << y << endl;
 cout << x << endl;
 return 0;
}
```

a) 10 10
b) 11 11
c) 10 11
d) 11 10

8.Which of the following is not a C++ access specifier?

a) public
b) private
c) protected
d) static

9.Which operator is used to access the member functions and variables of an object in C++?

a) .
b) ::
c) *
d) &

10. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
 int arr[] = {1, 2, 3, 4, 5};
 cout << arr[2] << endl;
 return 0;
}
```

a) 1
b) 2
c) 3
d) 4

11. What is the correct syntax for declaring a pointer in C++?

A. int *ptr;

B. ptr int;
C. pointer int;
d. all of the above

12. What is the output of the following code snippet?

```
int a = 10, b = 5;
int result = a + b * 2;
cout << result;
```

A. 30
B. 20
C. 15
D. 18

13.What is the difference between a stack and a queue in C++?

A. A stack is LIFO (last-in, first-out), while a queue is FIFO (first-in, first-out).
B. A stack is FIFO (first-in, first-out), while a queue is LIFO (last-in, first-out).
C. There is no difference between a stack and a queue in C++.
D. All of the above

14. What is the purpose of the "using namespace" statement in C++?

A. It defines a new namespace.
B. It specifies a class or function to use.
C. It imports a namespace into the current scope.
D. All of the above

15. Which of the following is not a valid C++ data type?

A. float
B. string
C. Boolean

16. What is the difference between pass by value and pass by reference in C++?

A. Pass by value makes a copy of the variable, while pass by reference passes the variable itself.
B. Pass by reference makes a copy of the variable, while pass by value passes the variable itself.
C. There is no difference between pass by value and pass by reference in C++.
D. All of the above

17. What is the output of the following code snippet?

```
int a = 5, b = 3;
if (a > b) {
cout << "a is greater than b";
} else {
cout << "b is greater than or equal to a";
}
```

A. a is greater than b
B. b is greater than or equal to a
C. This code will not compile because of a syntax error.
D. None of the above

18.What is the purpose of the "new" operator in C++?

A. It allocates memory for a new variable
B. It deletes a variable from memory
C. It declares a new variable
D. None of the above

19. What is the difference between "cin" and "getline" in C++?

A. "cin" is used to read a single value from the user, while "getline" is used to read a string of characters.
B. "getline" is used to read a single value from the user, while "cin" is used to read a string of characters.
C. Both "cin" and "getline" are used to read a single value from the user.
D. None of the above

20. What is the purpose of a destructor in C++?

A. To initialize a class object.
B. To free memory that was allocated by the object.
C. To define a new member function for the class.
D. All of the above

21. Which keyword is used to define a class in C++?

A. class
B. struct
C. object
D. Template

22. What is the correct syntax for declaring a function in C++?

A. int add(int x, int y);
B. add(int x, int y) : int;
C. int function add(x, y);
D. All of the above

23. What is the output of the following code snippet?

```
int arr[5] = {1, 2, 3, 4, 5};
cout << arr[3];
```

A. 1
B. 4
C. 5
D.6

24. What is the difference between a reference and a pointer in C++?

A. A reference is an alias for a variable, while a pointer is a variable that stores a memory address.
B. A reference is a variable that stores a memory address, while a pointer is an alias for a variable.
C. There is no difference between a reference and a pointer in C++.
D. None of the above

25. What is the purpose of the "const" keyword in C++?

A. It defines a constant variable that cannot be modified.
B. It specifies a variable as a reference.
C. It declares a variable as a pointer.

d. both and b.

26. What is the output of the following code snippet?

```
int x = 5;
cout << ++x << endl << x++;
```

A. 5 5
B. 6 6
C. 6 5
D. 5 6

27. Which of the following is not a valid way to pass arguments to a function in C++?

A. Pass by value
B. Pass by reference
C. Pass by pointer
D. Pass by constant

28.What is the output of the following code snippet?

```
int arr[3][2] = {{1, 2}, {3, 4}, {5, 6}};
cout << arr[1][1];
```

A. 1
B. 2
C. 3
D. 4

29.What is the difference between a class and a struct in C++?

A. A class can only have public members, while a struct can have public and private members.
B. A class can have constructors and destructors, while a struct cannot.
C. There is no difference between a class and a struct in C++.
D. A class has private members by default, while a struct has public members by default.

30.What is the purpose of the "new" operator in C++?

A. It allocates memory on the stack.
B. It creates a new instance of a class.
C. It deallocates memory from the heap.
D. It returns the size of a data type.

31. What is the output of the following code snippet?

```
int x = 5;
cout << x++ << endl << ++x;
```

A. 5 6
B. 5 5
C. 6 5
D. 6 6

32. Which of the following is not a valid C++ data type?

A. char
B. string
C. float

D. double

33.What is the output of the following code snippet?

```
int x = 10, y = 5;
cout << (x > y ? x : y);
```

A. 5
B. 10
C. 15
D. This code will not compile.

34.Which of the following is not a valid way to initialize an array in C++?

A. int arr[3] = {1, 2, 3};
B. int arr[] = {1, 2, 3};
C. int arr[3] {1, 2, 3};
D. int arr[3];
arr = {1, 2, 3};

35.What is the purpose of the "sizeof" operator in C++?

A. It returns the size of a data type in bytes.
B. It returns the address of a variable.
C. It returns the value of a variable.
D. It returns the type of a variable.

36. What is the output of the following code snippet?

```
int x = 5, y = 10;
if (x > y) {
cout << "x is greater than y";
} else if (y > x) {
cout << "y is greater than x";
} else {
cout << "x and y are equal";
}
```

A. x is greater than y
B. y is greater than x
C. x and y are equal
D. This code will not compile.

37.Which of the following is not a valid C++ control structure?

A. if statement
B. for loop
C. while loop
D. until loop

38. What is the output of the following code snippet?

```
int arr[] = {1, 2, 3};
cout << arr[3];
```

A. 0
B. 1
C. 2
D. 3

39.Which of the following is not a valid C++ access specifier?

A. public

B. private

C. protected

D. static

40. What is the output of the following code snippet?

```
int x = 5, y = 10;
cout << (x < y);
```

A. 0

B. 1

C. 5

D. 10

41. What is the output of the following code snippet?

```
int x = 10;
int y = x--;
cout << x << " " << y;
```

A. 9 9

B. 9 10

C. 10 9

D. 10 10

42.Which keyword is used to declare a variable as a constant in C++?

A. const

B. constant

C. readonly

D. final

43.What is the output of the following code snippet?

```
int arr[5] = {5, 4, 3, 2, 1};
cout << *(arr+2);
```

A. 5

B. 4

C. 3

D. 2

44. What is the difference between a function declaration and a function definition in C++?

A. There is no difference between a function declaration and a function definition in C++.

B. A function declaration provides the function signature, while a function definition provides the implementation.

C. A function definition provides the function signature, while a function declaration provides the implementation.

D. A function definition is used to declare a function, while a function declaration is used to define a function.

45.What is the purpose of the "static" keyword in C++?

A. It specifies that a variable or function is visible only within the current file

B. It declares a variable as a pointer.
C. It defines a constant variable that cannot be modified.
D. It specifies that a variable or function is shared among all instances of a class
46. What is the output of the following code snippet?

```
int a = 5, b = 3;
bool result = (a > b) && (a != b);
cout << result;
```

A. 0
B. 1
C. True
D. False

47.Which of the following is not a valid C++ data type?

A. bool
B. float
C. char
D. decimal

48. What is the output of the following code snippet?

```
int x = 10;
cout << (x < 20 ? "Less than 20" : "Greater than or equal to 20");
```

A. Less than 20
B. Greater than or equal to 20
C. 10
D. Undefined

49.Which keyword is used to inherit a class in C++?

A. base
B. super
C. extend
D. : (colon)

50. What is the output of the following code snippet?

```
int arr[] = {1, 2, 3, 4, 5};
for (int i = 0; i < 5; i++) {
cout << arr[i] << " ";
}
```

A. 1 2 3 4 5
B. 5 4 3 2 1
C. 1 3 5 7 9
D. None of the above

51. Which of the following is not a fundamental data type in C++?

A. int
B. float
C. double
D. string

52. What is the output of the following code snippet?

```
int x = 5, y = 10;
```

cout << (x > y ? x : y);

A. 5

B. 10

C. 0

D. Compiler error

53. What is the purpose of the "const" keyword in C++?

A. It defines a constant variable that cannot be modified.

B. It specifies a variable as a reference.

C. It declares a variable as a pointer.

D. It creates a new instance of a class.

54.Which keyword is used to declare a pointer in C++?

A. reference

B. pointer

C. int

D. *

55.What is the output of the following code snippet?

int arr[] = {1, 2, 3};

cout << *(arr + 2);

A. 1

B. 2

C. 3

D. Compiler error

56.What is the difference between ++i and i++ in C++?

A. There is no difference between ++i and i++.

B. ++i increments the value of i before it is used, while i++ increments the value of i after it is used.

C. i++ increments the value of i before it is used, while ++i increments the value of i after it is used.

D. ++i and i++ both decrement the value of i.

57.What is the output of the following code snippet?

int x = 2, y = 3;

cout << (x & y);

A. 0

B. 1

C. 2

D. 3

58.Which of the following is not a logical operator in C++?

A. &&

B. ||

C. !

D. &

59. What is the output of the following code snippet?

int arr[] = {1, 2, 3, 4};

cout << arr[3] << arr[2];

A. 43
B. 34
C. 24
D. 23

60.Which of the following is a correct way to declare a multidimensional array in C++?

A. int arr[2, 3];
B. int arr[2][3];
C. int arr[3][2];
D. All of the above

61.What is the output of the following code snippet?

```
int arr[] = {1, 2, 3, 4, 5};
cout << arr[0] << *(arr + 1) << arr[2];
```

A. 123
B. 135
C. 213
D. 321

62. Which of the following is not a valid C++ identifier?

A. myVariable
B. my_variable
C. my variable
D. myVariable123

63.What is the output of the following code snippet?

```
int x = 10;
if (x == 10 || x < 5)
cout << "True";
else
cout << "False";
```

A. True
B. False
C. Compiler error
D. Runtime error

64.Which of the following is not a valid data type in C++?

A. float
B. double
C. real
D. long double

65.What is the output of the following code snippet?

```
int x = 5, y = 10;
int* ptr = &x;
*ptr = 7;
ptr = &y;
*y = 20;
cout << x << " " << y;
```

A. 5 20
B. 7 10
C. Compiler error
D. Runtime error

66.What is the difference between "break" and "continue" statements in C++?

A. "break" exits the current loop, while "continue" skips the current iteration of the loop.
B. "break" skips the current iteration of the loop, while "continue" exits the current loop.
C. There is no difference between "break" and "continue" in C++.
D. "break" and "continue" are not valid C++ keywords.

67. What is the output of the following code snippet?

```
int arr[5] = {1, 2, 3, 4, 5};
int* ptr = arr;
cout << *ptr << " " << *(ptr + 1);
```

A. 1 2
B. 1 1
C. 2 3
D. Compiler error

68.What is the output of the following code snippet?

```
int x = 5;
int y = x++ * 3;
cout << x << " " << y;
```

A. 5 15
B. 6 15
C. 6 18
D. 5 18

69.What is the difference between "public", "private", and "protected" access modifiers in C++?

A. "public" members can be accessed from anywhere, "private" members can only be accessed from within the class, and "protected" members can be accessed from within the class and its derived classes.
B. "public" members can only be accessed from within the class, "private" members can be accessed from anywhere, and "protected" members can be accessed from within the class and its derived classes.
C. "public" members can be accessed from anywhere, "private" members can only be accessed from within the class and its derived classes, and "protected" members can only be accessed from within the class.
D. There is no difference between "public", "private", and "protected" access modifiers in C++.

70. What is the output of the following code snippet?

```
int x = 10;
if (x == 10) {
  int x = 20;
```

```
    cout << x << endl;
}
cout << x << endl;
```

A. 10 20
B. 20 10
C. 20 20
D. 10 10

71.Which of the following is not a valid data type in C++?

A. int
B. char
C. boolean
D. string

72.What is the output of the following code snippet?

```
int arr[5] = {1, 2, 3, 4, 5};
int *ptr = &arr[2];
cout << *ptr << endl;
```

A. 1
B. 2
C. 3
D. 4

73. What is the purpose of the "static" keyword in C++?

A. It specifies that a variable or function is local to a block of code.
B. It defines a constant value that cannot be modified.
C. It declares a variable as a pointer.
D. It specifies that a variable or function retains its value between function calls.

74.What is the output of the following code snippet?

```
int a = 2, b = 3, c = 4;
cout << (a += b *= c) << endl;
```

A. 20
B. 14
C. 12
D. 11

75.What is the output of the following code snippet?

```
int x = 10;
int y = ++x + x++;
cout << x << " " << y << endl;
```

A. 12 21
B. 12 22
C. 13 22
D. 13 23

76.What is the correct syntax for declaring a pointer in C++?

A. int *ptr;
B. int ptr;
C. int &ptr;

D. int ^ptr;

77.Which of the following operators is used for pointer arithmetic in C++?

A. *

B. &

C. +

D. /

78.What is the difference between a while loop and a do-while loop in C++?

A. A while loop executes the code inside the loop at least once, while a do-while loop checks the condition before executing the code inside the loop.

B. A while loop checks the condition before executing the code inside the loop, while a do-while loop executes the code inside the loop at least once.

C. There is no difference between a while loop and a do-while loop in C++.

D. A while loop and a do-while loop are different names for the same loop construct.

79. 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

80. Which feature in OOP allows reusing code?

A) Polymorphism

B) Inheritance

C) Encapsulation

D) Data hiding

81. A function that changes the state of the cout object is called a(n) ____

A. member B. adjuster

C. manipulator D. operator

82. 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

83.. 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

84. To hide a data member from the program, you must declare the data member in the _____

section of the class

A. concealed B. confidential

C. hidden D. private

E. restricted

85. External documentation includes
A. a printout of the program's code
B. flowcharts
C. IPO charts
D. pseudo code
E. All of the above
86. The function whose prototype is void getData(Item *thing); receives
A. a pointer to a structure
B. a reference to a structure
C. a copy of a structure
D. nothing
87. Null character needs a space of
A. zero bytes
B. one byte
C. three bytes
D. four bytes
88. The number of structures than can be declared in a single statement is
A. one
B. two
C. three
D. unlimited
89. Which of the following formulas can be used to generate random integers between 1 and 10?
A. 1 + rand() % (10 - 1 + 1)
B. 1 + (10 - 1 + 1) % rand()
C. 10 + rand() % (10 - 1 + 1)
D. 10 + rand() % (10 + 1)
90. Format flags may be combined using the _____
A. bitwise OR operator (|)
B. logical OR operator (||)
C. bitwise AND operator (&)
D. logical AND operator (&&)
91. Which of the following will store the number 320000 as a Float number?
A. counPop = (float) 3.2e5;
B. counPop = (float) 3.2e6;
C. counPop = (float) .32e5;
D. counPop = (float) .32e7;
92. The arguments that determine the state of the cout object are called
A. classes
B. manipulators
C. format flags or state flags
D. state controllers
93. The following statement where T is true and F is false T&&T||F&&T
A. is true

B. is false
C. is wrong
D. not applicable in C language

94. Which of the following statements declares a variable that can contain a decimal number?

A. dec payRate;
B. dec hourlyPay
C. float payRate
D. float hourlyPay;

95. The statement int num[2][3]={ {1,2}, {3,4}, {5, 6} };

A. assigns a value 2 to num[1][2]
B. assigns a value 4 to num[1][2]
C. gives an error message
D. assigns a value 3 to num[1][2]

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. The statement fwrite ((char*)&objl, sizeof(objl));

A. writes the member functions of objl to fl
B. writes the data in objl to fl
C. writes the member functions and me data of obj 1 to fl
D. writes the address of objl to fl

99. The body of a C++ function is surrounded by _____

A. parentheses
B. angle brackets
C. curly brackets
D. square brackets

100. Which of the following type casts will convert an Integer variable named amount to a

Double type?

A. (double) amount
B. (int to double) amount
C. int to double(amount)
D. int (amount) to double

101. The loosest type of coupling is

A. data coupling
B. control coupling

C. external coupling
D. pathological coupling

Answer Sheet

1	A	2	C	3	B	4	A	5	A	6	A	7	C	8	D	9	A
10	C	11	A	12	B	13	A	14	C	15	B	16	A	17	A	18	A
19	A	20	B	21	A	22	A	23	B	24	A	25	A	26	C	27	D
28	D	29	D	30	D	31	C	32	B	33	B	34	D	35	A	36	B
37	D	38	A	39	D	40	B	41	B	42	A	43	C	44	B	45	A
46	B	47	D	48	A	49	D	50	A	51	D	52	B	53	A	54	D
55	C	56	B	57	A	58	D	59	B	60	B	61	A	62	C	63	A
64	C	65	C	66	A	67	A	68	B	69	A	70	B	71	C	72	C
73	D	74	C	75	B	76	A	77	C	78	B	79	B	80	B	81	C
82	D	83	D	84	D	85	A	86	A	87	B	88	D	89	A	90	A
91	A	92	C	93	A	94	D	95	C	96	A	97	C	98	B	99	C
100	A	101	A														