

9Topic : Programming

Questions :

1) C++:

1)

```
#include <stdio.h>
int main()
{
    const int x;
    x = 10;
    printf("%d", x);
    return 0;
}
```

a)Compiler Error b)10 c)5 d)Runtime Error (sukin)

2) STL Map internally implements ?

- a) Stack
- b) Binary Tree
- c) Red Black Tree
- d) AVL Tree(Sukin)

3) If a 2D matrix is represented by a vector of vectors how will you find the number of columns of the matrix ?

- a) nums.size()
- b) nums[0].size()
- c) nums.column()
- d) nums.size().size() (Sukin)

4. Are method overloading and method overriding (w.r.t C++) same?

- a. Both are same
- b Method overriding is available only in JAVA.
- c. Method overloading is not available in C++.
- d. Both are different (Sameer)

5. What is a friend function? (Sameer)

6. What is the output of the following snippet?

```
#include <iostream>
```

```
int main(int argc, const char * argv[]) {  
    int a[] = {1, 2, 3, 4, 5, 6};  
    std::cout << (1 + 3)[a] - a[0] + (a + 1)[2];  
}(Sameer)
```

7. Inline functions are useful when

- a.Function is large with many nested loops
- b.Function has many static variables
- c.Function is small and we want to avoid function call overhead.
- d.None of the above(Subramaniam)

8.Which of the following is not correct for virtual function in C++ ?

- a)Must be declared in public section of class.
- b)Virtual function can be static.
- c)Virtual function should be accessed using pointers.
- d)Virtual function is defined in base class.(Subramaniam)

9.In C++, polymorphism requires:

- a)Inheritance only
- b)Virtual functions only
- c)References only
- d)Inheritance, Virtual functions and references(Subramaniam)

10. 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 (vishal)

11. Which member function is used to determine whether the stream object is currently associated with a file?

- a) is_open
 - b) buf
 - c) string
 - d) none of the mentioned
- (vishal)

12.How many types of inheritance are there in c++?

- A.2 B.3 C.4 D.5 (umapathi)

13. What is the use of Namespace?

- A. To encapsulate the data B. To structure a program into logical units. C. Both a and b D. none of the mentioned(naveen)

14..What is meant by pure virtual function?

- A. Function which does not have definition of its own.
- B. Function which does have definition of its own.
- C. Function which does not have any return type.
- D. None of the mentioned(umapathi)

15..What is the ability to group some lines of code that can be included in the program?

- A. specific task
- B. program control
- C. modularization
- D. macros(naveen)

16.Which operator is having the highest precedence?

- A. postfix
- B. unary
- C. shift
- D. equality(umapathi)

17.What is the use of dynamic_cast operator?

- A. it converts virtual base class to derived class
- B. it converts virtual base object to derived objects
- C. it will convert the operator based on precedence
- D. None of the mentioned(naveen)

18..Dereference operator is also called as

- a.pointer
- b.Reference operator
- c.Offset operator
- d.Deoffset operator(umapathi)

19.How can we make a C++ class such that objects of it can only be created using new operator?

If user tries to create an object directly, the program produces compiler error.

- (A) Not possible
- (B) By making destructor private
- (C) By making constructor private
- (D) By making both constructor and destructor private

20) Which of the following in Object Oriented Programming is supported by Function overloading and default arguments features of C++.

- A) Inheritance
- B) Polymorphism
- C) Encapsulation
- D) Abstraction (Ajeeth)

21) Predict the output.

```

#include <iostream>
using namespace std;

template <class T>
T max (T &a, T &b)
{
    return (a > b)? a : b;
}

template <>
int max <int> (int &a, int &b)
{
    cout << "Called ";
    return (a > b)? a : b;
}

int main ()
{
    int a = 10, b = 20;
    cout << max <int> (a, b);
}

```

- a) 20
- b) Called 20
- c) Compiler error (Ajeeth)

2) C:

1)

```

char c[] = "MANE2018";
char *p =c;
printf("%s", p + p[3] - p[1]) ;

```

What is the output?

- a)MANE2018 b)E2018 c)2018 d)018(sukin)
- 2) What is the output of this code ?

```

#include <stdio.h>
int main()
{
    int c = 2 ^ 3;
    printf("%d\n", c);
}

```

- a) 1
- b) 8
- c) 9
- d) 0 (Sukin)

3. Which keyword can be used for coming out of recursion?

- a) break
- b) return
- c) exit
- d) Both break and return (Sukin)

4. Predict the output or error(s) for the following:

```
1.      void main()
{
        int const * p=5;

        printf("%d",++(*p));
} (Sameer)
```

```
5.      main()
{
    int i=_l_abc(10);
        printf("%d\n",--i);
}
int _l_abc(int i)
{
    return(i++);
} (Sameer)
```

```
6.      main()
{
    static int var = 5;
    printf("%d ",var--);
    if(var)
        main();
} (Sameer)
```

7. #include <stdio.h>

```
int main()
{
    int i = 0;
    switch (i)
    {
        case '0': printf("Quiz");
            break;
        case '1': printf("Time");
            break;
        default: printf("QuizTime");
    }
    return 0;
```

```

}
a)Quiz
b)Time
c)QuizTimei
d)Compile time error(Subramaniam)

```

8. Which of the following is true about return type of functions in C?

- a)Functions can return any type
- b)Functions can return any type except array and functions
- c)Functions can return any type except array, functions and union
- d)Functions can return any type except array, functions, function pointer and union(Subramaniam)

9. #include <stdio.h>

```

int main()
{
    void demo();
    void (*fun)();
    fun = demo;
    (*fun)();
    fun();
    return 0;
}

```

10. Let x be an integer which can take a value of 0 or 1. The statement if(x == 0) x = 1; else x = 0; is equivalent to which one of the following?

- A. x=1+x;
- B. x=1—x;
- C. x=x—1;
- D. x=1%x;

```

void demo()
{
    printf("QuizTime ");
}(Subramaniam)

```

- a.QuizTime
- b.QuizTlme QuizTime
- c.Compliler error
- d.Blank screen

11.Does there any function exist to convert the int or float to a string?

- A. Yes
- B. No(naveen)

12..Which Datastructure is used by malloc() for object creation?

- a.heap b.tree c.stack d.queue(umapathi)

13.which are built in datastructure in c ?

- a.array

- b.structure
- c.files
- d.all the above(naveen)

14.A Keyword typedef is used to ?

- a.create a type of function
- b.define a type of function
- c.define the type of variable
- d.create a new datatype name(umapathi)

15.By default a real number is treated as ?

- a.float
- b.double
- c.long double
- d.integer(naveen)

16.Which operator in c can't be overloaded

%

+

::

-(umapathi)

17. Which of the following statement is correct for **switch** controlling expression?

- a. Only int can be used in "switch" control expression
- b. Both int and char can be used in "switch" control expression.
- c. All types i.e. int, char and float can be used in "switch" control expression.
- d. "switch" control expression can be empty as well

18. Predict the output of below program

```
#include<stdio.h>
Int main()
{
    Int arr[5];
    // Assume base address of arr is 2000 and size of integer is 32 bit
    printf("%u , %u ", arr+1, &arr+1);
    return 0;
}
```

- a) 2004 2020
- b) 2004 2004
- c) 2004 garbage value
- d) The program fails to compile because Address-of operator cannot be used with Array name.

19. Which of the following permutation can be obtained in the same order using a stack assuming that input is the sequence 5, 6, 7, 8, 9 in that order?

- a) 7 8 9 5 6
- b) 5 9 6 7 8
- c) 7 8 9 6 5
- d) 9 8 7 5 6 (17- 19 Ajeeth)

3) Web:

1) Which tag is used to include YouTube videos in a web page?

- a) Iframe
- b) Xframe
- c) Video
- d) Src (Sukin)

2) How can you open a link in a new browser window?

- a.)
- b.)
- c.)
- d.) (sukin)

3) The _____ method of an Array object adds and/or removes elements from an array.

- a.) Reverse
- b.) Shift
- c.) Slice
- d.) Splice (Sukin)

4) Choose the correct HTML tag for the largest heading

- a.) <h6>
- b.) <heading>
- c.) <head>
- d.) <h1> (Sukin)

5) What do you know about CORS?

(vishal)

6) To match the root node in XSLT transform the syntax will be.

- a.) <xsl:template match="Document">
- b.) <xsl:template match="Root">
- c.) <xsl:template match="Parent">
- d.) <xsl:template match="/"> (Ajeeth)

7) What is the correct HTML for making a drop-down list?

- a.) <input type="list" />
- b.) <select>
- c.) <list>
- d.) <input type="dropdown" /> (Ajeeth)

8) Consider the following code snippet

```
console.log(p)
```

If p is not defined, what would be the result or type of error? (Santhosh)

- A. Zero** **B. Null** **C. ReferenceError** **D. ValueNotFoundError**

9) What is the output of the following code ? Why ? (Santhosh)

```
if([ ]) {  
    alert("True");  
}else {  
    alert("False");  
}
```

- A. True B.False C. No output D. ValueNotFound Error

10) What is the output of console.log(2+true) ? (Santhosh)

- A. true B. 3 C. Error

11) Does JavaScript pass parameter by value or by reference? (Santhosh)

JAVA

1.Java uses _____ to represent characters?

- a.ACSII b.unicode c.bytecode d.none of above(umapathi)

2.Thread class is available in

- a.java.io package
b.java.lang package
c.java.awt package
d.java.util package(naveen)

3.String is the predefined

- a.Method
b.Class
c.Variable
d.Object(umapathi)

4. Super is the predefined
- a.Keyword
 - b.Method
 - c.Keyword and Method
 - d.None of above(naveen)
- 5.Java is known as _____stage language
- a.One
 - b.Two
 - c.Three
 - d.Four(umapathi)
- 6.Which method can't be overridden
- a.super
 - b.static
 - c.final
 - d.println(naveen)
- 7.Smallest individual unit in java program is known as
- a.string
 - b.literal
 - c.token
 - d.operator(umapathi)

Answers:

C++:

- 1. a
- 2. c
- 3. B
- 4. Both are different. Overloading a method (or function) in C++ is the ability for functions of the same name to be defined as long as these methods have different signatures (different set of parameters). Method overriding is the ability of the inherited class rewriting the virtual method of the base class.
- 5. A function which is not a member of the class but still can access all the member of the class is called so. To make it happen we need to declare within the required class following the keyword 'friend'.
- 6. 8
- 7. C
- 8. B
- 9. D
- 10. D

11. A. Explanation: The member function `is_open` can be used to determine whether the stream object is currently associated with a file.

12.d

There are five types of inheritance in c++. They are single, Multiple, Hierarchical, Multilevel, Hybrid.

13.b

The main aim of the namespace is to understand the logical units of the program and to make the program so robust.

14.a

As the name itself implies, it have to depend on other class only.

15.c

Modularization is also similar to macros but it is used to build large projects.

16.a

The operator which is having highest precedence is postfix and lowest is equality.

17.a

Because the `dynamic_cast` operator is used to convert from base class to derived class.

18.c

19. B

EXP:It is not compiler error to create private destructor

When something is created using dynamic memory allocation, it is programmer's responsibility to delete it. So compiler doesn't bother.

20. B

21. B

C:

1. c
2. a
3. B
4. Compile Error : Cannot modify a constant value
5. 9
6. 54321
7. C
8. B
9. B
10. B
- 11.a
- 12.a
- 13.d
- 14.d
- 15.a
- 16.c
- 17.b
- 18.a
- 19.c

WEB:

1. a
2. c
3. d
4. D
5. CORS (Cross-Origin Resource Sharing) is a HTML5 staple. It allows you to request many different resources (jQuery, fonts, and so on) from a domain outside of the domain from which the resource came from.
6. d
7. B
8. C
9. A, Empty arrays are also JS objects and hence objects evaluate to true in JS.
10. B, The plus operator between a number and a boolean or two boolean will convert boolean to number. Hence, true converts to 1 and you get result of 2+1
11. Primitive type (string, number, etc.) are passed by value and objects are passed by reference.

Java

1.b

2.b

3.b

4.c

5.b

6.c

7.c