

## MCQ Unit-1 (Refer this for practice)

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**1. Which of the following is not an OOPS concept**

- A) Encapsulation
- B) Polymorphism
- C) Exception
- D) Abstraction

**2. Which among the following feature is not in the general definition of OOPS?**

- A) Modularity
- B) Efficient Code
- C) Code reusability
- D) Duplicate or Redundant Data

**3. Which feature of OOPS described the reusability of code?**

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

**4. What is the extra feature in classes which was not in the structures?**

- A) Member functions
- B) Data members
- C) Public access specifier
- D) Static Data allowed

**5. Which of the following statement of a program is not right?**

- A) `class teacher{ }; teacher s[5];`
- B) `class teacher{ }s;`
- C) `class teacher{ }; teacher s;`
- D) `class teacher{ }s[];`

**6. Which of the following syntax is incorrect for the class definition?**

- A) `student class{ };`
- B) `class student{ student(int a){} };`
- C) `class teacher{ public: teacher(int a){ } };`
- D) None of the mentioned

**7. Which of the following feature interacts one object with another object?**

- A) Message reading
- B) Message passing

- C) Data transfer
- D) Data binding

**8. Pure OOP can be implemented without using class in a program.  
(True or False)**

- a) True
- b) False

**9. Which of the two features match each other?**

- a) Inheritance and Encapsulation
- b) Encapsulation and Polymorphism
- c) Encapsulation and Abstraction
- d) Abstraction and Polymorphism

**10. Which among the following can restrict class members to get inherited?**

- a) Private
- b) Protected
- c) Public
- d) All three

**11. Which specifier allows a programmer to make the private members which can be inherited?**

- a) Private
- b) Default
- c) Protected

d) Protected and default

**12. Which specifier should be used for member functions of a class?**

a) Private

b) Default

c) Protected

d) Public

**13. What is the term used to indicate the variable and constants of a class?**

a) Data members

b) Variables of class

c) Data characters

d) Constants

**14. Data members \_\_\_\_\_ (C++)**

a) Can be initialized with declaration in classes

b) Can be initialized only with help of constructors

c) Can be initialized either in declaration or by constructor

d) Can't be initialized

**15. How many data members can a class contain?**

- a) 27
- b) 255
- c) 1024
- d) As many as required

**16. How to access data members of a class?**

- a) Dot operator
- b) Arrow operator
- c) Dot or arrow as required
- d) Dot, arrow or direct call

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

```
int n=10;
class A()
{
    private : int n;
    public : int m;
    A()
    {
        n=100; m=50;
    }
    void disp()
```

```
{  
    cout<<"n"<<m<<n;  
};  
a) 1050100  
b) 1005010  
c) n5010  
d) n50100
```

**18. Which of the following is a valid class declaration?**

- A. Class A { int x; };
- B. Class B { }
- C. Public class A { }
- D. Object A { int x; };

**19. Predict the output of following C++ program**

```
#include<iostream>  
  
using namespace std;  
  
class Empty {};  
  
int main()  
{  
    cout << sizeof(Empty);  
    return 0;}
```

**A) A non-zero value**

**(B) 0**

(C) Compiler Error

(D) Runtime Error

**20. Predict the output;**

```
class Test {  
    int x;  
};  
  
int main()  
{  
    Test t;  
    cout << t.x;  
    return 0;  
}
```

(A) 0

(B) Garbage Value

(C) Compiler Error

**21. Assume that an integer and a pointer each takes 4 bytes. Also, assume that there is no alignment in objects.**

**Predict the output following program.**

```
#include<iostream>
```

```
using namespace std;

class Test
{
    static int x;

    int *ptr;

    int y;
};

int main()
{
    Test t;

    cout << sizeof(t) << " ";

    cout << sizeof(Test *);

}
```

(A) 12 4

(B) 12 12

(C) 8 4

(D) 8 8



**22. Which of the following cannot be passed to a function in C++ ?**

- (A) Constant
- (B) Structure
- (C) Array
- (D) Header file

**23. Which of the following is not a correct statement?**

- (A) Every class containing abstract method must be declared abstract.
- (B) Abstract class can directly be initiated with 'new' operator.
- (C) Abstract class can be initiated.
- (D) Abstract class does not contain any definition of implementation.

**24. Static variables are like ..... as they are declared in a class declaration and defined in the source file.**

- A) inline member function
- B) non-inline member function
- C) static member function
- D) dynamic member function

**25. Which operator a pointer object of a class uses to access its data members and member functions?**

a) .

b) ->

c) :

d) ::

**26. What is the correct syntax of accessing a static member of a Class?**

Example class:

```
class A
{
    public:
        static int value;
}
```

a) A.value

b) A::value

c) A->value

d) A^value

**27. Pick the incorrect statement about inline functions in C++?**

- a) They reduce function call overheads
- b) These functions are inserted/substituted at the point of call
- c) Saves overhead of a return call from a function
- d) They are generally very large and complicated function

**28. Inline functions are avoided when**

- a) function contains static variables
- b) function have recursive calls
- c) function have loops
- d) all of the mentioned

**29. What will be the output of the following C++ code?**

```
#include <iostream>

using namespace std;

int main()
{
    int a;

    a = 5 + 3 * 5;

    cout << a;
```

```
    return 0;
```

```
}
```

a) 35

b) 20

c) 25

d) 30

**30. What will be the output of the following C++ code?**

```
#include <iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int i, j;
```

```
    j = 10;
```

```
    i = (j++, j + 100, 999 + j);
```

```
    cout << i;
```

```
    return 0;
```

```
}
```

a) 1000

b) 11

c) 1010

d) 1001

**31. What will be the output of the following C++ code?**

```
#include <iostream>

using namespace std;

int main ()
{
    int x, y;

    x = 5;

    y = ++x * ++x;

    cout << x << y;

    x = 5;

    y = x++ * ++x;

    cout << x << y;

    return 0;
}
```

- a) 749735
- b) 736749
- c) 367497
- d) 367597

**32. What will be the output of the following C++ code?**

```
#include <iostream>

using namespace std;

int main()
{
    int a = 5, b = 6, c;

    c = (a > b) ? a : b;

    cout << c;

    return 0;
}
```

a) 6

b) 5

c) 4

d) 7

**33. What will be the output of the following C++ code?**

```
#include <iostream>

using namespace std;

void fun(int x, int y)
{
```

```
x = 20;  
y = 10;  
}  
int main()  
{  
    int x = 10;  
    fun(x, x);  
    cout << x;  
    return 0;  
}
```

- a) 10
- b) 20
- c) compile time error
- d) 30

**34. How many minimum number of functions should be present in a C++ program for its execution?**

- a) 0
- b) 1
- c) 2
- d) 3

**35. What happens if the following program is executed in C and C++?**

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    foo();
```

```
}
```

```
int foo()
```

```
{
```

```
    printf("Hello");
```

```
    return 0;
```

```
}
```

- a) Error in both C and C++
- b) Warning in both C and C++
- c) Error in C++ but Warning in C
- d) Error in C but Warning in C++

**36. What happens if the following program is executed in C and C++?**

```
#include <stdio.h>
```

```
int main(void)
```

```
{
```



```
    const int j = 20;

    int *ptr = &j;

    printf("*ptr: %d\n", *ptr);

    return 0;

}
```

- a) Error in both C and C++
- b) Warning in both C and C++
- c) Error in C but Warning in C++
- d) Error in C++ but Warning in C

**37. What happens if the following program is executed in C and C++?**

```
#include <stdio.h>

void func(void)
{ printf("Hello"); }

void main()
{
    func();

    func(2);
}
```

- a) Error in both C and C++
- b) Outputs Hello twice in both C and C++
- c) Error in C and successful execution in C++
- d) Error in C++ and successful execution in C

**38. Which of the following is not a type of Constructor?**

- a) Friend constructor
- b) Copy constructor
- c) Default constructor
- d) Parameterized constructor

**39. What happens if non static members are used in static member function?**

- a) Compile time error
- b) Runtime error
- c) Executes fine
- d) Executes if that member function is not used

**40. Which among the following is proper syntax for class given below?**

```
class A
{
    int a,b;
    public : void disp();
}
```

- a) void disp::A(){ }
- b) void A::disp(){ }
- c) void A:disp() { cout<<a<<b ; }
- d) void disp:A(){ cout<<a<<b; }

**41. What is the output of the given program?**

```
#include < stdio.h >

using namespace std;

int main()
{
    int array[] = {10, 20, 30};
    cout << -2[array];
    return 0;
}
```

A) -15

B)-30

C)Compiler error

D)Garbage value

**42. Observer the given C++ program carefully and choose the correct output from the given options:**

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
int main() {
```

```
    cout<<is_array<int>::value; // case A
```

```
    cout<<is_array<char[10]>::value; // case B
```

```
    cout<<is_array<string>::value; // case c
```

```
    return 0;
```

```
}
```

A) 110

B) 001

C) 010

D) None of the above

**43. Which type of approach is used by the C++ language?**

- A) Right to left
- B) Left to right
- C) Top to bottom
- D) Bottom-up

**44. What will be the output of the following C code?**

```
#include <stdio.h>
void inline func1(int a, int b)
{
    printf ("a=%d and b=%d\n", a, b);
}
int inline func2(int x)
{
    return x*x;
}
int main()
{
    int tmp;
    func1(1,4);
    tmp = func2(6);
    printf("square val=%d\n", tmp);
    return 0;
}
```

a) a=1 and b=4

square val = 36

b) a=4 and b=1

- c) error
- d) square val = 36

**45. The following C code results in an error. State whether this statement is true or false.**

```
#include <stdio.h>

void f(double b)
{
    printf ("%ld\n",b);
}

int main()
{
    inline f(100.56);
    return 0;
}
```

- a) True
- b) False

**46. What will be the output of the following C code?**

```
#include<stdio.h>

static inline int max(int a, int b)
{
    return a > b ? a : b;
}

main()
{
    int m;
```

```
m=max(-6,-5);  
printf("%d",m);  
}
```

- a) -6
- b) -5
- c) Junk value
- d) Error

**47. Name the function whose definition can be substituted at a place where its function call is made \_\_\_\_\_**

- a) friends function
- b) inline function
- c) volatile function
- d) external function

**48. Any changes made to static data member from one member function \_\_\_\_\_**

- a) Is reflected to only the corresponding object
- b) Is reflected to all the variables in a program
- c) Is reflected to all the objects of that class
- d) Is constant to that function only

**49. Which is the correct syntax for declaring static data member?**

- a) static mamberName dataType;
- b) dataType static memberName;
- c) memberName static dataType;
- d) static dataType memberName;

### 50. The static member functions \_\_\_\_\_

- a) Can be called using class name
- b) Can be called using program name
- c) Can be called directly
- d) Can't be called outside the function

### 51. Which is correct syntax to access the static member functions with class name?

- a) className . functionName;
- b) className -> functionName;
- c) className : functionName;
- d) className :: functionName;

### 52. Predict the output of following C++ program.

```
#include <iostream>

using namespace std;

class Test
{
    static int x;
public:
    Test() { x++; }
    static int getX() {return x;}
};

int Test::x = 0;

int main()
{
    cout << Test::getX() << " ";
```



```
Test t[5];  
cout << Test::getX();  
}  
(A) 0 0  
(B) 5 5  
(C) 0 5  
(D) Compiler Error
```

### 53 Output of following C++ program?

```
#include <iostream>  
  
class Test  
{  
public:  
    void fun();  
};  
  
static void Test::fun()  
{  
    std::cout<<"fun() is static\n";  
}  
  
int main()  
{  
    Test::fun();  
}
```

```
    return 0;  
}
```

(A) fun() is static

(B) Empty Screen

(C) Compiler Error

**54. Predict the output of following C++ program.**

```
#include <iostream>  
  
using namespace std;  
  
class A{  
private:  
    int x;  
public:  
    A(int _x) { x = _x; }  
    int get() { return x; }  
};  
  
class B{  
    static A a;  
public:  
    static int get()
```

```
    { return a.get(); }  
};  
  
int main(void)  
{  
    B b;  
    cout << b.get();  
    return 0;  
}
```

(A) 0

(B) Linker Error: Undefined reference B::a

(C) Linker Error: Cannot access static a

(D) Linker Error: multiple functions with same name get()

**55. Which among the following can't be used to access the members in any way?**

a) Scope resolution

b) Arrow operator

c) Single colon

d) Dot operator

**56. In how many ways can an object be passed to a function?**

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

**57. The nested class can be declared \_\_\_\_\_**

- a) Public
- b) Private
- c) Protected
- d) Public, Protected, Private or Package private

**58. Which among the following is not a necessary condition for constructors?**

- a) Its name must be same as that of class
- b) It must not have any return type
- c) It must contain a definition body
- d) It can contains arguments

**59. Which among the following is correct?**

- a) `class student{ public: int student(){} };`
- b) `class student{ public: void student (){} };`
- c) `class student{ public: student{}}{} };`
- d) `class student{ public: student(){} };`

**60. Which object will be created first?**

```
class student
```

```
{
```

```
    int marks;
```

```
};
```

```
student s1, s2, s3;
```

a) s1 then s2 then s3

b) s3 then s2 then s1

c) s2 then s3 then s1

d) all are created at same time

**61. Which among the following is correct for the class defined below?**

```
class student
```

```
{
```

```
    int marks;
```

```
    public: student(){}
```

```
    student(int x)
```

```
    {
```

```
        marks=x;
```

```
    }
```

```
};
```

```
main()
```

```
{
```

```
    student s1(100);
```

```
    student s2();
```

```
    student s3=100;
```

```
    return 0;
```

}

- a) Object s3, syntax error
- b) Only object s1 and s2 will be created
- c) Program runs and all objects are created
- d) Program will give compile time error

**62. For constructor overloading, each constructor must differ in \_\_\_\_\_ and \_\_\_\_\_**

- a) Number of arguments and type of arguments
- b) Number of arguments and return type
- c) Return type and type of arguments
- d) Return type and definition

**63. Which type of constructor can't have a return type?**

- a) Default
- b) Parameterized
- c) Copy
- d) Constructors don't have a return type

**64. Which among the following is correct syntax for the destructors?**

- a) classname()
- b) ()classname
- c) ~classname()
- d) -classname()

**65. Which among the following is true?**

- a) First the constructor of parent classes are called in sequence of inheritance
- b) First the constructor of child classes are called in the sequence of inheritance
- c) First constructor called is of the object being created
- d) Constructors are called randomly

**66. Which among the following is correct for the code given below?**

```
class A
{
    private : A()
    {
    }
    public : A(int x)
    {
    }
};
A a;
A b(100);
```

- a) Program will give compile time error
- b) Program will run fine
- c) Program will give runtime error
- d) Program will give logical error

**67. The copy constructor can be used to \_\_\_\_\_**

- a) Initialize one object from another object of same type
- b) Initialize one object from another object of different type
- c) Initialize more than one object from another object of same type at a time
- d) Initialize all the objects of a class to another object of another class

**68. What is the syntax of copy constructor?**

- a) classname (classname &obj){ /\*constructor definition\*/ }
- b) classname (cont classname obj){ /\*constructor definition\*/ }
- c) classname (cont classname &obj){ /\*constructor definition\*/ }
- d) classname (cont &obj){ /\*constructor definition\*/ }

**69. Out of memory error is given when the object \_\_\_\_\_ to the copy constructor.**

- a) Is passed with & symbol
- b) Is passed by reference
- c) Is passed as <classname &obj>
- d) Is not passed by reference

**70. How much memory will be allocated for an object of class given below?**

```
class Test
{
    int mark1;
    int mark2;
    float avg;
```



```
char name[10];  
};
```

- a) 22 Bytes
- b) 24 Bytes
- c) 20 Bytes
- d) 18 Bytes

**71. The memory allocated for an object \_\_\_\_\_**

- a) Can be only dynamic
- b) Can be only static
- c) Can be static or dynamic
- d) Can't be done using dynamic functions

**72. If an object is declared in a user defined function \_\_\_\_\_**

- a) Its memory is allocated in stack
- b) Its memory is allocated in heap
- c) Its memory is allocated in HDD
- d) Its memory is allocated in cache

**73. Which operator can be used to check the size of an object?**

- a) sizeof(objectName)
- b) size(objectName)
- c) sizeofobject(objectName)
- d) sizedobject(objectName)

**74. Output of following program?**

```
#include<iostream>
using namespace std;
class Point {
    Point() { cout << "Constructor called"; }
};
int main()
{
    Point t1;
    return 0;
}
```

- (A) Compiler Error
- (B) Runtime Error
- (C) Constructor called

**75. Output of the following question**

```
#include<iostream>
using namespace std;
class X
{
public:
    int x;
};
int main()
{
    X a = {10};
    X b = a;
```

```
    cout << a.x << " " << b.x;  
    return 0;  
}  
(A) Compiler Error  
(B) 10 followed by Garbage Value  
(C) 10 10  
(D) 10 0
```

**76. Predict the output of following program?**

```
class Test  
{  
private:  
    int x;  
public:  
    Test(int i)  
    {  
        x = i;  
        cout << "Called" << endl;  
    }  
};  
  
int main()  
{  
    Test t(20);  
    t = 30; // conversion constructor is called here.  
    return 0;  
}
```

(A) Compiler Error

(B) Called

Called

(C) Called

**77. Output of the following program?(kindly assume lib file and std namespace)**

```
class Point
{
    int x, y;
public:
    Point(int i = 0, int j = 0) { x = i; y = j; }
    int getX() { return x; }
    int getY() { return y; }
};

int main()
{
    Point p1;
    Point p2 = p1;
    cout << "x = " << p2.getX() << " y = " << p2.getY();
    return 0;
}
```

(A) Compiler Error

(B) x = 0 y = 0

(C) x = garbage value y = garbage value

**78. Like constructors, can there be more than one destructors in a class?**

**(A) Yes**

**(B) No**

**79. Predict the output of following C++ program?**

```
int i;  
class A  
{  
public:  
    ~A()  
    {  
        i=10;  
    }  
};  
int foo()  
{  
    i=3;  
    A ob;  
    return i;  
}  
  
int main()  
{  
    cout << foo() << endl;  
    return 0;  
}
```

- (A) 0
- (B) 3
- (C) 10
- (D) None of the above

**80. How many member functions are there in this C++ class excluding constructors and destructors?**

```
class Box
{
    int capacity;
public:
    void print();
    friend void show();
    bool compare();
    friend bool lost();
};
```

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

**81. Pick the correct statement.**

- a) Friend functions are in the scope of a class
- b) Friend functions can be called using class objects
- c) Friend functions can be invoked as a normal function
- d) Friend functions can access only protected members not the private members

**82. If a function is friend of a class, which one of the following is wrong?**

- (A) A function can only be declared a friend by a class itself.
- (B) Friend functions are not members of a class, they are associated with it.
- (C) Friend functions are members of a class.
- (D) It can have access to all members of the class, even private ones.

**83. What will be the output of the following C++ code?**

```
#include <iostream>

using namespace std;

void fun(int x, int y)
{
    x = 20;
    y = 10;
}

int main()
{
    int x = 10;
    fun(x, x);
    cout << x;
    return 0;
}
```

- a) 10
- b) 20

- c) compile time error
- d) 30

**84. Identify the incorrect statement.**

- a) iostream is a standard header and iostream.h is a non-standard header
- b) iostream is a non-standard header and iostream.h is a non-standard header
- c) iostream is a standard header and iostream.h is a standard header
- d) iostream is a non-standard header

**85. What does a default header file contain?**

- a) prototype
- b) implementation
- c) declarations
- d) pointing



## Answer key

1. C
2. D
3. 4
4. A
5. D
6. A
7. B
8. B
9. C
10. A
11. C
12. D
13. A
14. B
15. D
16. C
17. D
18. A
19. A
20. C
21. C
22. D
23. B
24. B
25. B
26. B
27. D

- 28. D
- 29. B
- 30. C
- 31. A
- 32. A
- 33. A
- 34. 1
- 35. C
- 36. D
- 37. A
- 38. A
- 39. A
- 40. B
- 41. D
- 42. C
- 43. D
- 44. A
- 45. A
- 46. B
- 47. B
- 48. C
- 49. D
- 50. A
- 51. D
- 52. C
- 53. C
- 54. B
- 55. C

- 56. 3
- 57. D
- 58. C
- 59. D
- 60. A
- 61. C
- 62. A
- 63. D
- 64. C
- 65. A
- 66. A
- 67. A
- 68. C
- 69. D
- 70. A
- 71. C
- 72. A
- 73. A
- 74. A
- 75. C
- 76. B
- 77. B
- 78. B
- 79. B
- 80. B
- 81. C
- 82. C
- 83. A

**84. A**

**85. C**