**Programming Concepts – Test 1**

**1. What type of programming language is C++ ?**

A) Procedural oriented  
B) Structured oriented  
C) Object oriented  
D) Machine learning oriented

Ans: C

**2. What is the correct file extension for a C++ source file?**

A) .cp  
B) .cpp   
C) .c++  
D) .ccp

Ans : B

**3. Which of the following is used to insert a comment in C++?**

A) /\* comment \*/  
B) // comment  
C) Both A and B   
D) # comment

Ans : C

**4. What is the correct syntax to output text in C++?**

A) printf("Hello");  
B) cout << "Hello";   
C) echo "Hello";  
D) System.out.println("Hello");

Ans : B

**5. Which header file is needed for input/output operations in C++?**

A) <input.h>  
B) <stream.h>  
C) <iostream>   
D) <stdio.h>

Ans : C

**6. What is the return type of the main() function in C++?**

A) void  
B) int   
C) char  
D) float

ANS : B

**7. How is a variable declared in C++?**

A) var x;  
B) declare x;  
C) int x;   
D) define x;

ANS : C

**8. Which of the following is a valid identifier in C++?**

A) 2value  
B) value\_1   
C) int  
D) #data

ANS : B

**9. What is the default value of an uninitialized local variable in C++?**

A) 0  
B) NULL  
C) Garbage value   
D) 1

ANS : C

**10. Which symbol is used for the modulus operation?**

A) /  
B) \  
C) %   
D) &

ANS : C

**11. Which loop is guaranteed to execute at least once?**

A) for  
B) while  
C) do-while   
D) switch

ANS : C

**12. What will 5 / 2 evaluate to in C++?**

A) 2.5  
B) 3  
C) 2   
D) Error

ANS : C

**13. Which keyword is used to define a constant?**

A) define  
B) const   
C) let  
D) static

ANS : B

**14. What is the purpose of break in a loop?**

A) Skips the next iteration  
B) Exits the loop   
C) Restarts the loop  
D) Pauses execution

ANS : B

**15. Which statement is used to skip the current iteration?**

A) exit  
B) skip  
C) continue   
D) return

ANS : C

**16. Which operator is used for logical AND?**

A) &  
B) &&   
C) and  
D) ||

ANS : B

**17. What is the output of cout << (4 == 4);?**

A) true  
B) false  
C) 1   
D) 0

ANS : C

**18. What is the use of cin in C++?**

A) To display output  
B) To read input   
C) To define variables  
D) To declare functions

ANS : B

**19. Which keyword is used to define a function in C++?**

A) function  
B) def  
C) void  
D) return-type function\_name()

ANS : D

**20. What is the purpose of a return statement?**

A) Exit the program  
B) Return a value from a function   
C) Break a loop  
D) Call another function

ANS : B

**21. What is the output of true && false?**

A) true  
B) 1  
C) 0   
D) false

ANS: C

**22. Which data type is used to store a single character?**

A) int  
B) char   
C) string  
D) float

ANS:B

**23. What is the size of an int in most systems?**

A) 2 bytes  
B) 4 bytes   
C) 8 bytes  
D) 1 byte

ANS:B

**24. What is the index of the first element in an array?**

A) 1  
B) -1  
C) 0   
D) None

ANS:C

**25. Which keyword is used to define an array?**

A) list datatype []  
B) array [size ]  
C) datatype name[size];   
D) set [size]

ANS:C

**26. How many times will the loop run: for(int i=0; i<5; i++)?**

A) 4  
B) 5   
C) 6  
D) 0

ANS:B

**27. What will ++i do?**

A) Post-increment  
B) Pre-increment   
C) Decrement  
D) Nothing

ANS:B

**28. Which of these is not a loop in C++?**

A) for  
B) while  
C) repeat   
D) do-while

ANS:C

**29. What is the output of: cout << 10 % 3;?**

A) 3  
B) 0  
C) 1   
D) 10

ANS:

**30. What is the maximum number of elements in int arr[5]?**

A) 6  
B) 0  
C) 4  
D) 5

**31. Which of the following is used to define a class in C++?**

A) object  
B) struct  
C) class   
D) define

**32. What is the correct syntax for creating an object in C++?**

A) class MyClass;  
B) MyClass obj;   
C) object MyClass;  
D) create MyClass obj;

**33. Which feature of OOP enables reusability of code?**

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

**34. What is function overloading?**

A) Two functions with the same return type  
B) Two functions with different names  
C) Two functions with same name but different parameters   
D) One function with multiple return types

**35. What does a constructor do?**

A) Destroys an object  
B) Initializes an object   
C) Deletes memory  
D) Changes class name

**36. Which symbol is used for scope resolution in C++?**

A) :  
B) ::   
C) ->  
D) .

**37. What is the size of a pointer on a 64-bit system?**

A) 2 bytes  
B) 4 bytes  
C) 6 bytes  
D) 8 bytes

**38. What is the output of a function that doesn't return anything?**

A) Integer  
B) Float  
C) Char  
D) Void

**39. Which keyword is used to handle exceptions?**

A) handle  
B) catch  
C) try   
D) error

**40. Which operator is used to as a ternary operator?**

A) .  
B) ?:   
C) ::  
D) &

**41. Which of the following is not a type of inheritance in C++?**

A) Single  
B) Multiple  
C) Multilevel  
D) Circular

**42. Which is the correct statement for union?**

A) Groups more than one elements of same data type  
B) Groups more than one elements of different data type  
C) Groups more than one elements of same data type, which are stored in different memory location  
D) Groups more than one elements of same data type, which are stored in same memory location

**43. What is the default access specifier for class members in C++?**

A) public  
B) private   
C) protected  
D) global

**44. Which of the following supports run-time polymorphism?**

A) Function overloading  
B) Constructor overloading  
C) Virtual functions   
D) Friend functions

**45. The value of the variable is retained during the next function call is using \_\_\_ ?**

A) final   
B) const  
C) static  
D) sealed

**46.** \_\_\_\_\_ refers to the process of **hiding internal implementation details** and **showing only the essential features** of an object to the user.

A) Encapsulation   
B) Data hiding  
C) Abstraction  
D) Polymorphism

**47. Which of the following is a valid destructor declaration?**

A) ~ClassName();   
B) ClassName();  
C) delete ClassName();  
D) !ClassName();

**48. What is the purpose of a virtual function?**

A) Hide base class function  
B) Allow static binding  
C) Achieve dynamic binding   
D) Protect data

**49. Constructors can be overloaded. Say True or False.**

A) True  
B) False

**50. Can function return more than one values?**

A) True  
B) False

**II. Give the output of the following**

1.

for (int i = 1; i <= 3; i++) {

for (int j = 1; j <= 2; j++) {

cout << i << "," << j << " ";

}

}

**Ans:**

2.

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

int sum = 0;

for (int i = 0; i < 3; i++) {

sum += arr[i];

}

cout << sum;

**Ans:**

3.

int square(int x) {

return x \* x;

}

int main() {

cout << square(4);

}

**Ans:**

4.

struct Student {

int roll;

char grade;

};

int main() {

Student s = {101, 'A'};

cout << s.roll << " " << s.grade;

}

**Ans:**

5.

class Test {

public:

int a;

void set(int x) { a = x; }

void get() { cout << a; }

};

int main() {

Test t;

t.set(100);

t.get();

}

**Ans:**

6.

class A {

public:

int x;

};

int main() {

A obj;

obj.x = 5;

cout << obj.x \* 2;

}

**Ans:**

7.

#include <iostream>

using namespace std;

class Employee {

private:

int salary; // Hidden data

public:

void setSalary(int s) {

salary = s;

}

int getSalary() {

return salary;

}

};

int main() {

Employee emp;

emp.setSalary(50000);

cout << "Salary: " << emp.getSalary();

}

**Ans:**

8.

#include <iostream>

using namespace std;

class Greet {

public:

Greet() {

cout << "Welcome to C++!";

}

};

int main() {

Greet g;

}

**Ans:**

9.

#include <iostream>

using namespace std;

class Box {

public:

Box() {

cout << "Default ";

}

Box(int x) {

cout << "Parameterized";

}

};

int main() {

Box b1;

Box b2(10);

}

**Ans:**

10.

#include <iostream>

using namespace std;

class Counter {

public:

void showCount() {

static int count = 0;

count++;

cout << count << " ";

}

};

int main() {

Counter c1, c2;

c1.showCount();

c2.showCount();

c1.showCount();

}

**Ans:**