

# Department of Computer Science & IT

Faculty: Mrs. Priyanka Soni

## MCA/MSc/PGD II Sem

### C++ Theory Assignment

Q1 Explain the Object Oriented principle & applications of Object Oriented principal.

Q2 Explain If else ladder and for loop with example in C++.

Q3 Explain Inline function using an example.

Q4 Explain the concept of pointer and reference variable in C++ with an example.

Q5 What are the major differences between object oriented programming and Procedural programming?

Q6 Explain the concept of Class and Object with an example.

Q7 What is Constructor in C++, features of constructor and uses of it.

Q8 Explain types of Constructor available in C++, with example.

Q9 What is Destructor in C++ and its features?

Q10 Define Inheritance and concept of base and derived class in C++.

Q11 Explain the types of Inheritance available in C++ with example. An example

Q12 What do you mean by virtual function, explain by an example.

Q13 What do you mean by abstract class in c++?

Q14 What is the difference between Interface and abstract class available in c++.

Q15 What do you mean by polymorphism?

Q16 Explain function overloading in C++ using an example.

Q17 Explain Operator overloading in C++ using an example.( Use binary operator overloading)

Q18 What do you mean by run time polymorphism.

Q19 What do you mean by Template class in C++, explain by an example.

Q20 Write a note on Exception handling in C++.

Q21 Explain the streams and modes for file handling in C++.

Q22 Explain the concept of friend function available in C++.

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### C++ Practical Assignment

- Q1 Write a C++ program to print week days name using switch case.
- Q2 Write a C++ program to implement all arithmetic operations using call by value function. (Add, subtract, multiply, divide, mod).
- Q3 Write a C++ program to implement inline function.
- Q4 Write a C++ program to implement an array and its operations (add, display, search) using functions.
- Q5 Write a C++ program to implement string functions available in String class.(strcpy(), strcat(), strrev(),etc)
- Q6 Write a C++ program to implement a student class with data members as rno, class, m1, m2, m3 and member functions as read(), display(), calculatePercentage().
- Q7 Write a C++ program to implement a Bag Class with data member as items and member function as read(),add\_item(), show() and also implement Copy constructor in Bag class.
- Q8 Write a C++ program to implement no argument and with argument constructor in a class.
- Q9 Write a C++ program to show calling of constructor and destructor in a class.
- Q10 Write a C++ program to implement a friend function for a class.
- Q11 Write a C++ program to implement an Array class with data members as n, a[10]. And member function as read(), search(), display(), insert().
- Q12 Write a C++ program to implement a matrix class and show operator overloading of + and – operators.
- Q13 Write a C++ program to implement function overloading.
- Q14 Write a C++ program to implement single inheritance.

- Q15 Write a C++ program to implement multiple inheritance.
- Q16 Write a C++ program to implement hybrid inheritance.
- Q17 Write a C++ program to implement an interface.
- Q18 Write a C++ program to implement an abstract class.
- Q19 Write a C++ program to handle an exception using try, throw and catch block.
- Q20 Write a C++ program to create a file and read its content.