

**St.Joseph's College of Arts and Science (Autonomous)**

**PG & Research Department of Computer Science**

**Subject: PROGRAMMING IN C++**

**Subject Code: CS203S**

**Class: I CSD A&B (SH-I)**

**Staff Name: J.Antony Daniel Rex**

**UNIT I**

**Five Mark Questions**

1. With suitable example explain the cin and cout streams.
2. What are the benefits of OOP? Explain.
3. Briefly explain the various benefits of OOP.
4. Distinguish between the following terms:
  - (a) Objects and classes
  - (b) Inheritance and polymorphism
  - (c) Data abstraction and data encapsulation
  - (d) Dynamic binding and message passing
  - (e) Function overloading and function overriding.

**Ten Mark Questions**

1. Summarize the basic concepts of Object Oriented Programming.
2. Discuss the benefits and applications of Object Oriented Programming

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**Unit-II**

**Five Mark Questions**

1. Summarize the error handling functions.
2. What are the advantages of function prototypes in C++?
3. Explain any three formatted console I/O functions.
4. Explain the rules for overloading an operator.
5. What is Function Overloading? What are the steps involved in function selection?
6. Write a short note on C++ tokens.
7. Explain the functions used to perform the input and output operators on files.
8. Write a note on if and switch statements.

**Ten Mark Questions**

1. Narrate the selection and loop control structures available in C++.
2. What is a class? How it is declared? How the member functions are defined?
3. Explain the various control structures with suitable examples.
4. With suitable examples, explain inline functions.

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**Unit-III**

**Five Mark Questions**

1. What is a friend function? List the special properties of a friend function.
2. Write down the rules for overloading operators.
3. List down the operators that cannot be overloaded and cannot be overloaded using friend function.
4. What is a parameterized constructor? Explain with a simple program.
5. What are friend functions? Explain the methods of defining friend functions with an example.
6. Explain the various class access specifiers.
7. Discuss about constructors and destructors.
8. What is a Destructor in C++? Give an example.
9. List out the rules regarding Virtual Functions.
10. a) What is a friend function?  
b) Write a C++ program using friend function to find the mean value of two numbers.
11. What is a constructor? List some special properties of the constructor functions.
12. Discuss about the visibility of base class and derived class members.
13. What is a virtual base class? When do we make a class virtual?

**TEN Mark Questions**

1. Discuss about virtual functions.
2. Explain about virtual function with example.
3. a) What is a Constructor? Give an example.

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- b) What are the special characteristics of constructor functions?
3. How type conversions between objects can be achieved? Explain any one.
4. Create a class String and overload the operator + to add two strings.

**Unit-IV**

**Five Mark Questions**

1. Describe the syntax of single inheritance in C++.
2. Discuss about the visibility of base class and derived class members.
3. What is a virtual base class? When do we make a class virtual?

**TEN Mark Questions**

1. With suitable program explain multiple inheritance.
2. Discuss different types of inheritance briefly.
3. Explain the different forms of inheritance.
4. Write a C++ program to sort a list of given numbers in ascending order.
5. Explain in detail multilevel inheritance with an example
6. Write and explain the syntax of defining a derived class. Explain single inheritance with an example program.

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**Unit-V**

**Five Mark Questions**

1. With suitable example explain the cin and cout streams.
2. Summarize the error handling functions.
3. Discuss about any three classes for file stream operations.
4. Explain the different file stream classes.
5. What is a file mode? Describe the various file mode options available.

**TEN Mark Questions**

1. Discuss about any five C++ stream classes in detail.
2. Write a C++ program to count the number of characters, words and lines in a file using command line arguments.
3. a) Write short note on file pointers.  
b) List the functions for manipulations of File Pointers.
4. Discuss about file pointers.
5. Write a detailed note on command-line arguments.