**Note: All Questions are Compulsory and Carry Equal Marks.**

**Q.1: Attempt Any Four From the Following:** (20 M)
1. Give the difference between object oriented programming language and procedure oriented programming language.
2. Explain following operators with proper example:
1. ::    2.->*    3..*    4.delete
3. Write a note on Type conversion.
4. Explain the concept of inline function with proper example.
5. What is class?How does it accomplish data hiding?
6. Object can be used as a function argument. Explain with proper example.
7. How memory can be allocated for objects? Explain.
8. Write a note on Destructor in C++.

**Q.2: Attempt Any Four From the Following:** (20 M)
1. Explain the concept of binary operator overloading.
2. What are different form of inheritance? Give example of each.
3. Write a note on this pointer.
4. Write a C++ program to illustrate how pointers to a derived object are used.
5. How polymorphism can be achieved at compile time and run time?
6. Write a C++ program to illustrate the concept of array of pointers to objects.
7.Explain getline() and write() function with proper example.
8. Write a note on C++ stream classes.

**Q.3: Attempt Any Four From the Following:** (20 M)
1. Explain following file stream classes: 1.ifstream 2.Ofstream 3.fstream
2.What are the input and output streams ?
3. What is file mode? Describe the various file mode options available.
4. Write a C++ program to implement bubble sort algorithm using template function.
5. What is an exception? How an Exception handled in C++?
6. Explain try... and catch.. block with proper example.
7. What are the components of standard  template library?
8. What is an iterator? What are it's characterstics?

**Q.4: Attempt Any Three From the Following:** (15 M)
1. Write a short note om memory management operator.
2. Write a C++ program to print following output using for loop.
@
@       @
@       @       @
@       @       @       @
3. Write a C++ program to overload + operator.
4. What is a virtual base class? When do we make a class virtual?
5. How we can open and close file? Explain by proper programming example.
6. Write a C++ program to illustrate the application of multiple catch statements.

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