



**BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY,  
NAVI MUMBAI**

**Unit Test-II (Question Bank)**

**Program: CM/IF (Computer Group)**

**Semester: III**

**Course and Code: Object Oriented Programming using C++ (313304)**

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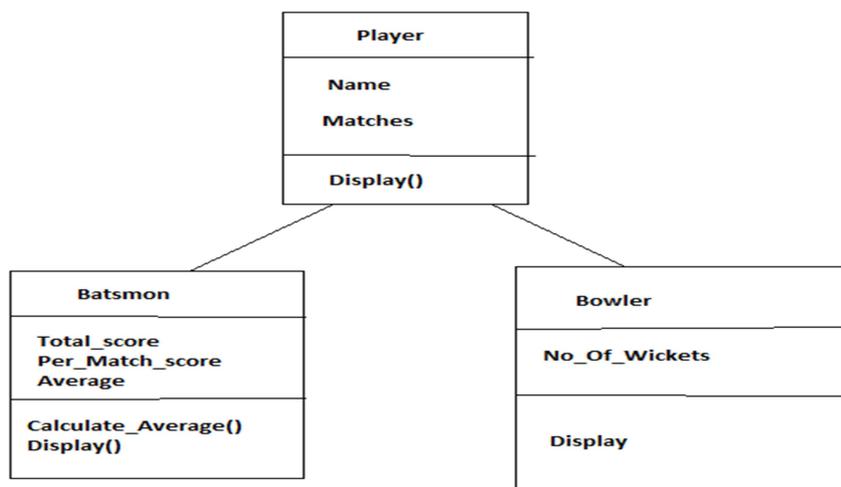
**Chapter No: 03      Extending classes using Inheritance:**

**(02 mark questions)**

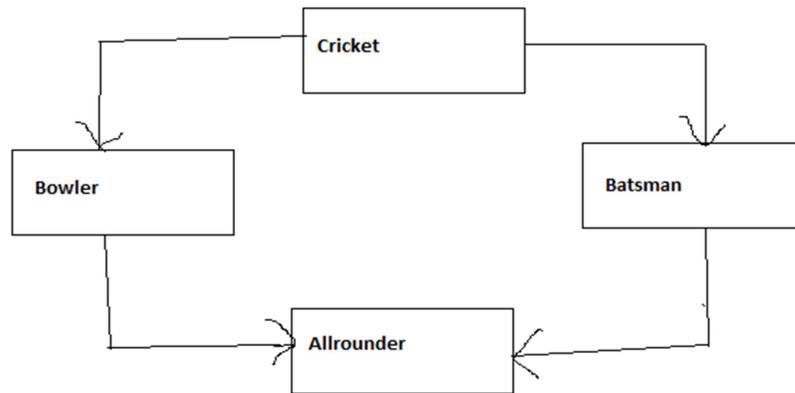
1. Write syntax for creating derived class.
2. Define term abstract class.

**(04 mark questions)**

1. Write a program to implement given class hierarchy.



2. Write a C++ program to implement the concept of Virtual Base class for following figure. Assume suitable data and function members.



3. Write a program which shows the use of constructor in derived class.

## Chapter No: 04      Pointers and Polymorphism in C++

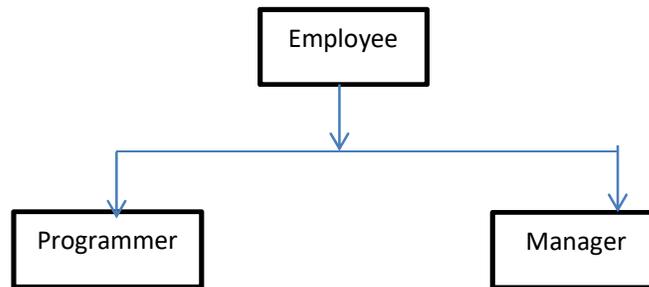
### (02 mark questions)

1. Define pointer and write syntax of declaration of pointer.
2. List the any two advantage of pointer.
3. How to declare pointer to object write syntax.
4. Define term polymorphism and list the types of polymorphism.
5. Define term function overloading and operator overloading
6. List any four rules for virtual function.
7. Describe pure virtual function.

### (04 mark questions)

1. Write a C++ program to declare a class “Box” having data member’s height, width and breadth. Accept this information for one object using pointer to that object. Display the area and volume of that object.
2. Describe ‘this’ pointer in C++ with a suitable example.
3. Write a C++ program declare a class “Polygon” having data members width and height. Derive classes “Rectangle” and “Triangle” from “Polygon” having area() as a member function. Calculate area of triangle and rectangle using pointer to derived class object.
4. Differentiate between Compile-time polymorphism and Run-time polymorphism
5. Write a C++ program to interchange the values of two int, float and char using function overloading.
6. List the rules for operator overloading.

7. Write a C++ program to add two complex numbers using operator overloading by a friend function or member function.
8. Write a program for below class hierarchy for employee where the base class is employee and derived class are programmer and manager. Here make display function virtual which is common for all and which will display information of programmer and manager interactively.



## Chapter No: 05 File operations

**(02 mark questions)**

1. Define term file
2. Describe the term stream
3. Describe the term input stream
4. Describe the term output stream
5. Differentiate between ios::ate and ios::app

**(04 mark questions)**

1. Draw and explain stream class hierarchy.
2. What is a file mode? Explain in details the various file mode options available.
3. Differentiate between sequential access and random access.
4. Write a C++ program to Copy the contents of One File into another File.
5. Write C++ program to write and read objects in binary file using write() and read () methods.