Assignment

Ques-1 Distingueshed between the following terms.
(i) Object and classes.
(ii) Data Abstraction and Data Encapsulation
(iii) Inheritence and polymorphism.

Answer (i) **object**:- An object is an instance of a class. As already mentioned above, all the data members and member functions of the class can be accessed with the help of objects.

Classes:- class is a user-define datatype that contain its own data members and member functions. ~~and~~ The data members and member function can be accessed with the help of object. A class is used to organize information or data so a programmer can reuse the elements in multiple instances.

(ii) Data Abstraction:- It can be achieved into two way.
1) Abstraction using class:-
2) Abstraction in Header File:-

(i) Data Abstraction is process of providing only the essential details to the outside world and hiding the internal details.
(ii) Data Abstraction is a programming technique that depends on the seperation of the interface and implementation details of the program.

Data Encapsulation :- It is define the wrapping up of the data and information in a single unit. OOP's encapsulation define as a binding together. The data and the function that menipulation.

(iii) Inheritence and polymorphism.

Inheritence ⇒ It is a process in which one object aquires all the property and behaviour of it's parents object automatically. In such way you can reuse, extend or modify the attribute and behaviour which are define in other class. The class which inherit the member of another class is called "drived class" and the class whose members are inherit called base class.

Polymorphism ⇒ The term polymorphism is the combination of 'poly' + 'morphs' which means many forms. There are two types of polymorphism in c++.

(i) Compile Time Polymorphism.
(ii) Run Time Polymorphism

We can define polymorphism as the ablity of a message to be displayed in more than one form. A real-life example of polymorphism is a person who at the same time can have different characteristi A man at the same time is a father, a husband, and an employee.

Ques-2 ⇒ What do you mean by dynamic Binding? How is it useful in OOP's?

Answer ⇒ Dynamic binding in C++ is a practice of connecting the function calls with the function definitions by avoiding the issues with static binding, which occured at build time. Because dynamic binding is flexible, it avoids the drawbacks of static binding, which connected the function call and definition at built time.

It is also possible to use dynamic binding with a single function name to handle multiple objects.

Ques-3 ⇒ What is OOP's? How is it different from procedure oriented programming?

Answer ⇒ In OOP's concept of objects and classes is introduced and hence the program is divided into small chunks called objects which are instances of classes.

In procedural programming, the main program is devided into small parts based on the functions and is treated as separate program for individual smaller program.

Ques-4 ⇒ How dose a main function in C++ is differ from main function in C.

Answer ⇒ Return type in main function of C is always int wherease in C++, it can also be void. Boath C & C++ allow passing command line arguments to main().

Ques-5: write a c++ program using class and objects that will ask for a temprature F° and convert it in c°.

```
#include <iostream>
using namespace std;

class temp
{
    float f, c;
    Public:
    void convert()
    {
        cout << " Enter temprature in F° :";
        cin >> f;
        c = (f-32) * 5/9;
        cout << " Temprature in celcius :" << c;
    }
};
int main()
{   temp t1;
    t1.convert();
    return 0;
}
```