**Q-2: What is OOP? List concept of OOP.**

**Ans:**

* The Object Oriented Programming was mainly designed to overcome the flaws or disadvantages of procedure Oriented Programming.
* In Object Oriented Programming, the application programs are organized, designed and written around the data, making Object Oriented Programming data centric.
* Unlike procedure oriented programming( POP), more emphasis is laid on data rather than procedure or algorithms.
* In OOP, the data are closely tied more closely to the functions and does not allow the data to flow freely around the entire program making the data more secure. Both data and methods are treated together as integral entities.

**List OOP concepts:**

1. **Class**
2. **Objects**
3. **Inheritance**
4. **Polymorphism**
5. **Abstraction**
6. **Encapsulation**
7. **Template**
8. **Aggregation**
9. **Friend Class**
10. **Friend Function**
11. **Constructor, Destructor**
12. **Dynamic Memory Management**
13. **Files**

**Q-3: Difference between C and C++.**

**Ans:**

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| **No** | **C** | **C++** |
| **1** | C is procedure oriented programming language where more emphasis is laid on the algorithms or procedure rather than data. | C++ is an object oriented programming language where more emphasis is laid on data rather than algorithm or procedure |
| **2** | There is no strict-type-checking in C. | Strict type checking is done in C++.so many programs that run well in C compiler will result in many warnings and error under a C++ compiler. |
| **3** | C supports ‘Early-binding’, in which all the functions related to their function call are resolved at compile time. All individual resolved functional calls create an individual (.o) files which can be later linked together to create a final executable file. | C++ supports both Early binding and Late binding. Late binding is a process of resolving functions related to the function calls during runtime. Here the functions are related to the class much after the compilation time. This is also known as dynamic binding. |
| **4** | Concept of default arguments are not available in C. | Concept of default argument are available in C++. |
| **5** | The memory management in done by the built-in functions, malloc, calloc, realloc, free. | The memory management in done easily using the ‘new’  and ‘delete’ operators. |
| **6** | Declaration of variable have to be done before the first executable statement within a block making the declaration of variables very rigid. | Declaring of variable can be done at any point in the program,  Whenever necessary ; making variable declaration more flexible compared to C language. |
| **7** | Functions cannot be overloaded. | Functions can be overloaded. |
| **8** | For input/output must be import #include<stdio> header file.  It means standard input output file | For input/output must be #include<iostream> header file . it means  Input output stream file. |
| **9** | For input by user:  scanf(); statement are used in C  Ex:scanf(“%d”,&a); | For input by user:  cin>>; statement are used.  Ex:cin>>a; |
| **10** | For output on console screen:  printf(); statement are used in C. Ex:print(“Hello”); | For output on console screen:  Cout<<; statement are used in C  Ex:cout<<”Hello”; |