Topics-

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Introduction to Object Oriented Programming
C++ Introduction
Namespaces
Class and Object
Operations
Exception Handling
Memory management
C++ Language features
Inheritance
Virtual Function
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Exam

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7 to 9 questions are their for cpp
Questions are straight forward.
on theory and on programs
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Agenda-

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Limitations of C
POP vs OOP
History of CPP
OOP Language
Datatypes in CPP
Structure in c and CPP
Access Specifiers in Structure
Namespace
Scope Resolution Operator
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Limitation of C

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C language is a Procedure Oriented Language(POP)
It was not providing data security
The more complex is your program it becomes hectic to manage in C
Reusability of code is limited.
Top Down Approach
eg- FORTRAN,PASCAL
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Object Oriented Programming (OOP)

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It is a Terminology
Bottom Up Approach
Reusability is maximum
eg- C++,JAVA,Python,C#
If any language follows 4 major pillars then such language is called as OOP
language
3 minor pillars->are not compulsory pillars
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Major pillars (Compulsary)

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1. Abstraction
    Knowing only essential things.
2. Encapsulation
    Binding all the entities together
    Path to acheive abstraction is encapsulation
3. Modularity
    Dividing entire code into multiple files
4. Hirerachy -> inheritance
    Some part of features is going to be inherited from parent/Base to
child/Derived
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Minor Pillars (Optional)

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1. Polymorphism / Typing
    one entity taking multiple forms
    eg - Mobile
2. Concurrency
    Multiple threads accessing the same resource a same time.
    eg - Battery of Mobile
3. Persistance
    Storage of Data
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History of C++

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It was developd by Bjarne Strousturp
It was developed in AT&T Bell Lab in 1979, on Unix OS
It was developed with the help of C and Simula Languages
It was named as C with classes
It was renamed in In 1983 to C++(CPP)
C++ is a OOP Language
eg - Games,Mozilla Browser,OS(Apple OS)
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DataTypes

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It Defines 3 things
    1. Memory - how much memory it is going to reserve
    2. Nature - what type of data i can store
    3. Operation - What all operations i can do on that data.

1. Fundamental Datatypes
    int, double,float, char, void
2. Derived Datatypes
    Array,enum,structure,union,function
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bool(boolean) datatype

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bool stands for boolean
it can store either true or false
any non zero number is considered as true.
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wchar_t datatype

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wide character
It reserves 2 bytes in memory
It can store 65000+ different types of characters.
It is generally used for international languages like Japnese.
Its implementation is compiler dependent.
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Structure in C and C++

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In c we cannot write functions inside structure
In c++ we can write functions inside structure
In CPP we have two Access Specifiers (private,public)
By default in Cpp the structure members are public
access specifiers can be used to limit the avaiibility of the members outside the
structure.
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Namespace

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Namespace is used to avoid name ambugity/confusion
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Scope Resolution Operator (:😃

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1.It is used to access members from the namespace
2.It is used to define functions outside the class/structure
3.It is used to initialize static data members outside the class
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