Introduction (Chapter - 1)

1) What is Object Oriented Programming (OOP)?
2) What is Procedure/Structure Oriented Programming?
3) What are the characteristics of Procedure Oriented Programming?
4) What are the limitations of Procedure Oriented Programming?
5) What are the characteristics of Object Oriented Programming?
6) What are the features of Object Oriented Programming?
7) Write the advantages of OOP.
8) Write the disadvantages of OOP.
9) Write the difference between POP and OOP.

Introduction to C++ (Chapter - 2)

1) Why C++ is needed?
2) What is C++?
3) Write the features of C++.Would you consider it better than structured programming? If you do, what makes it better?
4) Describe about history of C++.
5) Difference between C & C++.
6) What is encapsulation in C++? Write its advantages.
7) How can encapsulation be enforced/achieved in C++?
8) What is data abstraction? Compare it with encapsulation in C++.

Programs

1) WAP to find prime number in object oriented ways.
2) WAP to create class 'time' with data members days, hours, minute, and second.Then add two time object by taking object as argument and also returning object as argument.

Chapter-4 (Objects and Classes)

a. Why do you need a constructor? Write down different types of constructor and their usage. How can you initialize constant member of a class? And what is constructor?
b. What do you mean by static data member and static functions? Explain their use in program.
c. Why don't you use an object to call the static member function explain with example?
d. Why do you need to use reference in the argument to copy constructor?
e. When inline function may not work? What do you understand by default argument? Write syntax of default argument. And what is inline function.
f. Define this pointer with its application.
g. What is friend function and friend class? Why do we need friend function?
h. Explain why default arguments are used with function?
i. What do you mean by destructor? Explain the necessity of copy constructor with example.
j. What is function overloading?

Chapter-3 (C++ Language Construct)

1. What is dynamic memory allocation?
2. How pass by reference with alias variable is different than the pass by reference with pointer variable
3. Explain reference variable with suitable example.
4. What is name space?
5. What is token, write its detail?
6. Explain the operators in c++ that enables dynamic memory management with example.
7. Explain ambiguity that may arise when using both function overloading and default argument.
8. What is inline function? Explain how it increases execution speed of the program?

polymorphism (Chapter – 7)

a) What do you mean by runtime type information(RTTI)?
b) What are constructs that are available in C++ for run time type information.
c) What do you mean by polymorphic class?
d) What are different RTTI mechanisms in C++.
e) What are virtual function and pure virtual function?
f) Explain the need of virtual function with suitable example.
g) How dynamic cast and type id operators are used to achieve RTTI?
h) Explain compile time and runtime binding.
i) Differentiate abstract base class and concrete class.
j) Discuss the role of virtual function in C++ to cause dynamic polymorphism.Show with example how it is different from compile time polymorphism.
k) What is abstract class?
l) What is virtual destructor?
m) Explain about static cast operator and re-interpret cast operator.
n) What is polymorphism?

Templates (Chapter – 9)

a) What do you mean by class template? Write down the syntax and use of class template.

b) What do you mean by function template? Write down the syntax of function template.

c) Explain how default arguments are used with class template with example.How do you ~~know~~ throw only specified exception from a function?

d) Explain why do we need template.Explain the function of template overloading with suitable example.

e) How do you use function template ~~with multiple template~~ with multiple template types?give example.

Exceptional Handling (Chapter – 10)

a) What is exception and how it is different than traditional error handling?

b) Write and explain the exception handling.

c) Write advantage of exception handling over traditional error handling? Explain the exception handling mechanism in C++?

d) What is re throwing exception? Explain how the exception is re thrown with a suitable program.

e) Explain about all Exception Handling constructs.Explain multiple exceptions handling C++.

File Handling (Chapter – 8)

a) What is steam/stream class? How can we perform the formatted I/o with stream class objects?

b) Explain different stream classes for file I/O.

c) What are different ios class function and flags that are used for formatted I/O operation?

d) What is Manipulators? Explain different manipulator in C++.

e) Write short notes on the access pointer and their manipulators.

f) Explain about stream class hierarchy. How a file can be open in C++.

g) Sequential and random access are two methods to access a data file, which one do you prefer and why?

h) What are different file access pointers?