

Satyug Darshan Institute of Technology, Faridabad

Programme: BCA(DS & General)

**Year:2
Semester:3rd sem**

Subject Name : Object Oriented Programming using C++

**Subject
Code:BCG-203-V**

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Unit -1

Short Questions

S. No.	Questions	Bloom Taxonomy
1	What is the fundamental unit of programming in procedural programming?	KL1
2	Name one key feature of OOP that is absent in procedural programming.	KL1
3	How does data security differ between procedural and OOP?	KL2
4	What is the primary focus in procedural programming: functions or data?	KL1
5	Give an example of a language that follows the procedural paradigm.	KL1
6	How is code reusability achieved differently in OOP vs procedural?	KL2
7	What is meant by data hiding in OOP?	KL2
8	In which paradigm is the program typically divided into procedures?	KL1

Long Questions

9	Compare and contrast procedural and object-oriented programming paradigms with suitable examples.	KL4
10	Discuss the advantages of OOP over procedural programming in large-scale software development.	KL5
11	How does the concept of state differ in procedural vs OOP? Illustrate with a code snippet.	KL3
12	Explain the features of OOP with example.	KL2
13	Which paradigm is better for modeling real-world entities and why?	KL4
14	How does debugging differ between OOP and procedural programs?	KL4

Unit -2

Short Questions

S. No.	Questions	Bloom Taxonomy
1	What is the correct syntax to include the iostream library in C++?	KL1
2	What is the difference between cin and cout?	KL2
3	Write the syntax for a for loop in C++.	KL1
4	What is the use of the namespace keyword?	KL2
5	List out the different types of data types used in C++ with example.	KL1

Long Questions

6	Explain the structure of a basic C++ program with all essential components.	KL2
7	Describe the various data types available in C++ with examples.	KL2
8	Discuss the difference between struct and class in C++.	KL4
9	Write a program that demonstrates the use of arrays and functions in C++.	KL3
10	Write a C++ program to swap two numbers using call by reference & by value.	KL3
11	How do you define a function outside a class in C++?	KL3

Unit -3

Short Questions

S. No.	Questions	Bloom Taxonomy
1	What is encapsulation in C++?	KL1
2	How do you make a class member private?	KL1

3	What is a constructor? Give its syntax.	KL1
4	What is the purpose of a destructor?	KL2
5	How do you create an object of a class?	KL1
6	How do you define a constructor outside the class?	KL3
7	What is an inline function in a class?	KL1
8	How do you achieve encapsulation in C++?	KL2
9	What is the this pointer?	KL2
Long Questions		
10	Design a C++ class BankAccount with encapsulation, including methods for deposit and	KL4
11	Explain the principles of class design with emphasis on abstraction and encapsulation.	KL2
12	Implement a class Student with private data members and public member functions to access them.	KL3
13	Discuss the role of access specifiers in achieving encapsulation.	KL4
14	Write a C++ program to demonstrate the use of constructors and destructors with dynamic memory	KL3
Unit -4		
Short Questions		
S. No.	Questions	Bloom Taxonomy
1	What is operator overloading? Give an example.	KL1
2	How is dynamic memory allocated in C++?	KL1
3	What is inheritance? Name its types.	KL1
4	What is polymorphism? How is it achieved?	KL2
5	How do you open a file for writing in C++?	KL2
6	What are templates in C++?	KL1
7	What is exception handling? Name the keywords used.	KL1
8	What is composition in C++?	KL2
9	How do you overload the << operator?	KL3
10	What is a virtual function?	KL2
Long Questions		
11	Write a C++ program to demonstrate multiple inheritance with an example.	KL3
12	Implement a class template.	KL4
13	Explain runtime polymorphism with a complete C++ example.	KL3
14	Develop a C++ program that reads from one file and writes to another with exception handling.	KL4
15	Demonstrate operator overloading by creating a class Complex with overloaded + and * operators.	KL4
16	Explain different component of STL.	KL2