Subject Title: Programming in C++	Prepared by: Kishore Bezawada
Year: I Semester: II	Updated on: 22-03-

SHORT ANSWER QUESTIONS:

Unit - I:

1. Structure of C++ Program

2. Tokens

3. Storage Classes

4. Operator Precedence & Associativity

5. Expressions

6. While Vs. Do-While

7. Dynamic Arrays

8. Pointers

9. Recursion

10. C Vs. C++ (or) Procedure-oriented Vs. Objected Oriented Programming

11. Benefits of OOP

12. Applications of OOP

13. Linear Search

14. Binary Search

15. Bubble Sort

16. Selection Sort

Unit - II:

17. Class & Object (or) Instantiation (or) Data Encapsulation

18. Scope Resolution Operator

19. Constructor

20. Destructor

21. const keyword

22. Function Overloading

23. Operator Overloading Rules

24. Constructor Overloading

25. Member-wise Assignment

26. This pointer

27. new & delete operators (Dynamic Memory Allocation & Deallocation)

28. Type Conversion (Casting)

29. Aggregation

Unit - III:

30. Inheritance (Reusability) (Derivation)

31. Access Modifiers (Access Controls or Access Specifiers or Visibility Modes)

32. Order of constructor call

33. Data Abstraction

34. Polymorphism

35. Method Overriding (Function Overriding)

36. Upcasting

37. Streams

38. Manipulators

Unit - IV:

39. Exceptions

40. Try…Catch

41. Throw Vs. Rethrow

42. Class Template

43. Function Template

44. STL

LONG ANSWER QUESTIONS:

Unit - I:

1. What is a Data Type? Explain different data types in C++.

2. Explain different types of Operators in C++.

3. Explain about different Control Structures in C++.

4. What is an Array? Explain how arrays are implemented in C++ with example.

5. Explain about the Searching Techniques in C++ with suitable program.

6. Explain about the Sorting Techniques in C++ with suitable program.

7. What is a Function? Explain how a function can be declared and defined in C++.

8. What is a Function Call and explain different types of function calls with examples.

9. Write about Basic functional concepts (Features or Benefits) of Object-Oriented Programming (OOP).

10. Explain different String handling functions in C++.

Unit - II:

11. Define a Class & Object. Explain how an object is created with suitable example.

12. What is a Constructor? Explain different types of constructors with examples.

13. Explain the usage of Array of objects.

14. What is Function Overloading? Explain it with suitable program.

15. What is Constructor Overloading? Explain how to implement it with a suitable program.

16. Explain the purpose of Friend function & class with suitable example.

17. Explain the importance of Inline functions with example program.

18. Write a program to show the usage of Static data members and functions.

19. What is an Operator overloading? Write a program to overload an unary operator (unary minus or ++ or --).

20. What is an Operator overloading? Write a program to overload an Binary operator (Arithmetic Operator or Relational Operator).

21. Write a program to overload Binary operator using Friend function.

Unit - III:

22. What is an Inheritance (Reusability)? Explain different types of inheritance with examples.

23. Write about Access Controls (Visibility Modes) in Inheritance.

24. Explain how Static functions can be implemented in Inheritance.

25. What is Upcasting in C++? Explain it with suitable example.

26. Explain why Base class constructor is called inside derived class with suitable program.

27. What is Polymorphism? Explain the types of Polymorphism.

28. What is Virtual Function? Explain it with a suitable example.

29. What is Pure Virtual Function? Explain it with a suitable example.

30. What is an Abstract Class? Explain how Data Abstraction is implemented with suitable example.

31. What are Stream Classes in C++ and Explain about Input / Output streams?

32. Explain how Unformatted I/O operators are implemented with examples.

33. Explain how Formatted Console I/O operators are implemented with examples.

34. Write about Manipulator functions used in C++.

Unit - IV:

35. What is an Exception handling? Explain it with a suitable example.

36. Explain how multiple catch statements can be implemented with suitable example.

37. Differentiate Throwing and Rethrowing with suitable example.

38. What is a Template in C++? Explain how the templates are implemented in C++.

39. Illustrate Class Template with an example.

40. Illustrate Function Template with an example.

41. Write a program to overload functions using template.

42. What is STL? Explain the components of STL.