

Time : Three Hours

Max marks : 100

ANSWER ALL QUESTIONS

PART A (10 X 1 = 10 Marks)

1. ----- refers to the act of representing essential features without including the background details or explanations.
i) Isolation ii) Encapsulation iii) Abstraction iv) Inheritance
2. The operator >> is known as ----- operator in C++.
i) Double increase ii) Greater than iii) Extraction iv) Equality
3. A Prototype describes the function interface to the compiler by giving details such as ----- and the type of return values.
i) Number and type of arguments ii) Type of data iii) Type of function
iv) Value to be given as input.
4. ----- refers to the use of the same function name to create functions that perform different tasks.
i) overloading ii) operator overloading iii) function overloading
iv) multiple functions
5. The data within a class is ----- and the functions are public
i) public ii) private iii) protected iv) hiding
6. An Array name, used in the source file, represents the -----of the array
i) datas in the array ii) elements iii) data type iv) constants.
7. When you overload an arithmetic assignment operator, the result
i) goes in the object to the right of the operator
ii) goes in the object to the left of the operator
iii) goes in the object of which the operator is a member
iv) must be returned

8. To be accessed from a member function of the derived class, data or functions in the base class must be public or -----
- i) protected ii) private iii) public and private iv) public and protected
9. A pure virtual function is a virtual function with no -----.
- i) data ii) member function iii) body iv) prototype
10. A C++ stream is
- i) the flow of control through a function
- ii) a flow of data from one place to another
- iii) associated with a particular class
- iv) a file

ANSWER ALL QUESTIONS

PART B (10 X 2 = 20 Marks)

11. How is object oriented programming different from procedure oriented programming?
12. List any two features of OOP.
13. What is the application of scope resolution operator in C++?
14. What is meant by an inline function?
15. Distinguish between default and parameterized constructors.
16. Name two properties of static data member.
17. List the access specifiers used in C++
18. What is abstract base class?
19. What is the advantage of using Template in C++.
20. Mention the types of exceptions used in C++.

ANSWER ALL QUESTIONS

PART C (5 X 14 = 70 Marks)

21. a) Discuss in detail about the basic concepts of object oriented programming. (14)

(or)

21. b) State the characteristics of object oriented languages? Explain. (14)

22. a) Write a C++ program to print the values of the function (14)

$y = e^{-x}$
for x varying from 0 to 10 in steps of 0.1.

(or)

22. b) Write a program to calculate the volume of cube, cylinder and rectangular box using function overloading. (14)

23. a) Discuss in detail about copy constructors with the help of suitable program. Also list the advantages of copy constructor. (14)

(or)

23. b) How are arrays passed as function arguments? Explain with example C++ program. (14)

24. a) Explain operator overloading. Write a C++ program to illustrate overloading of = operator. (14)

(or)

24. b) Discuss in detail about the types of inheritances. (14)

25. a) Write short notes on i) this pointer ii) friend functions (14)

(or)

25. b) Discuss in detail about File pointers, Templates and exceptions. (14)