



বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

BCA 4th Semester Examination 2022

OBJECT ORIENTED PROGRAMMING USING C++

PAPER-2201

Full Marks : 70

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Group - A

Answer any *four* questions.

4×15

1. (a) What is inheritance ?

(b) Explain different types of inheritance with proper examples.

(c) Write a C++ program to show multiple inheritance.

2+8+5

2. (a) What is function overloading? Why it is necessary?
 (b) Write a C++ program to implement function overloading.
 (c) Can we overload a function template? Illustrate with example. (2+2)+6+5
3. (a) What is polymorphism?
 (b) Explain compile-time and run-time polymorphism.
 (c) Run-time polymorphism is called dynamic binding and compile-time polymorphism is called static binding. —Explain. 3+6+6
4. Define operator overloading. What is exception handling? How and where is “throw” used? Give an example. 2+3+(5+5)
5. (a) What do you mean by reference variable? Is there any difference between reference variable and pointer—Explain.
 (b) Difference between Procedure Oriented Programming and Object Oriented Programming.
 (c) What is default argument? Explain it with suitable example. (3+3)+4+(2+3)
6. What do you mean by precedence of operators? Distinguish between delete and delete []. Is it possible to subtract a pointer from another pointer? Write proper reason in support of your answer. Define friend function and write down the characteristics of it along with a suitable example. Write a short note on STL in C++. 2+2+(1+1)+(2+3)+4
7. Define namespace in C++ with a suitable example. What is the size of empty class in C++ and why? Differentiate between deep copy and shallow copy with suitable examples. 6+3+6

8. Write short notes (any *three*) : 3×5

- (a) Virtual function ;
- (b) 'This' pointer ;
- (c) Message passing ;
- (d) Scope Resolution Operator.

Group - B

Answer any *one* question. 1×10

9. (a) Explain 'inline function'. State two situations where inline functions may not work.

(b) What is virtual base class ? Why it is used ? (4+2)+(2+2)

10. (a) What do you mean by call by value and call by reference ? Explain with an example.

(b) What is abstract class ? 8+2

—