

PAPER ID—10598

B.C.A. EXAMINATION, 2024

(Fourth Semester)

OBJECT ORIENTED PROGRAMMING

USING C++

Code : BCA-208

Time : 3 Hours

Maximum Marks : 80

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) Define Object oriented programming.  
(b) What do you mean by flow control ?  
(c) What is Private visibility in C++ ?  
(d) Which operator is used for dynamic memory allocation ?  
(e) Explain virtual function.  
(f) Can we use multiple inheritance in C++ ? How ?  
(g) What is the term denoting resource capture ?  
(h) What is namespace in C++ ?  $8 \times 2 = 16$

**Unit I**

2. (a) Explain the following : 8  
(i) Polymorphism  
(ii) Encapsulation.  
(b) What are the differences between POP and OOP ? 8

3. Explain the following : 16
- (a) Recursion
  - (b) String data type
  - (c) Array
  - (d) Resolution and Ternary Operator.

### Unit II

4. What do you mean by constructor ? Explain in detail its types with example. Also explain destructor with example. 16
5. (a) What do you mean by memory management ? How is it implemented in C++. 10
- (b) Explain "This" and Assignment operator with example. 6

### Unit III

6. (a) How inheritance play role in reusing the code ? Explain Multilevel inheritance in detail with example. 8
- (b) Write a program to overriding member function in C++. 8

7. Explain in detail with suitable programming example :
- (a) Friend function 8
  - (b) Static Function. 8

### Unit IV

8. What is Exception ? How is it handled in C++ ? Explain in detail. 16
9. Explain the following with example : 16
- (a) Template class
  - (b) Template function
  - (c) Iterators and hash
  - (d) Namespace.