

Dr. Babasaheb Ambedkar Open University
Term End Examination February – 2026

Course	: BSCIT	Date	: 07/03/2026
Subject Code	: BSCIT-204	Time	: 11:30am to 01:45pm
Subject Name	: Object Oriented Programming using C++	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Explain the features and benefits of OOP.
2. What is inheritance? Explain different forms of inheritance with diagrams.
3. Define a class and object. Explain with example.
4. Explain constructors and destructors in detail.
5. Explain file handling in C++ with example of file read/write operations.

Section B

Answer the following (Attempt any four) (20)

1. What are manipulators? Explain endl and setw with examples.
2. Explain inline function with example.
3. What is operator overloading?
4. What are access specifiers?
5. Explain type casting and type conversion in C++.
6. What is friend function?

Section C

Part – A (Multiple Choice Questions) (10)

Q-1. Who is the founder of C++?

- | | |
|-------------------|----------------------|
| A) James Gosling | B) Bjarne Stroustrup |
| C) Dennis Ritchie | D) Rick Mascitti |

Q-2. Which of the following is not a feature of Object-Oriented Programming?

- | | |
|------------------|-------------------------|
| A) Inheritance | B) Data Hiding |
| C) Encapsulation | D) Sequential Execution |

Q-3. Which operator in C++ is called the scope resolution operator?

- | | |
|-------|--------|
| A) -> | B) :: |
| C) . | D) ? : |

Q-4. The default access specifier for class members in C++ is:

- | | |
|--------------|------------|
| A) public | B) private |
| C) protected | D) global |

Q-5. Which loop in C++ is guaranteed to execute at least once?

- | | |
|------------------|------------------|
| A) for loop | B) while loop |
| C) do-while loop | D) infinite loop |

Q-6. A pure virtual function is declared using:

- | | |
|------------------------|------------------|
| A) function()=1; | B) function()=0; |
| C) virtual function(); | D) function(); |

Q-7. Which header file is required for using cin and cout in C++?

- | | |
|------------|---------------|
| A) stdio.h | B) iostream.h |
| C) conio.h | D) iomanip.h |

Q-8. Operator overloading is an example of:

- | | |
|------------------------------|--------------------------|
| A) Data Abstraction | B) Encapsulation |
| C) Compile-time Polymorphism | D) Run-time Polymorphism |

Q-9. Which of the following is not an Object-Oriented Language?

- A) Java
- B) C++
- C) COBOL
- D) Smalltalk

Q-10. A class containing pure virtual functions is called:

- A) Base class
- B) Abstract class
- C) Derived class
- D) Friend class

Part – B (State whether the following statements are true or false)

(10)

- 1 In OOP, data and functions are tied together in a single unit called class.
- 2 In procedural programming, emphasis is given on objects.
- 3 Private data members of a class cannot be accessed directly outside the class.
- 4 Inheritance in C++ allows reusability of code.
- 5 A do-while loop in C++ may never execute if the condition is false.
- 6 A constructor is a special member function having the same name as the class.
- 7 Operator overloading changes the original meaning of an operator permanently.
- 8 The keyword virtual is used in C++ to achieve run-time polymorphism.
- 9 A class with a pure virtual function can instantiate objects of its own.
- 10 The continue statement in C++ terminates the loop execution completely.
