

Dr. Babasaheb Ambedkar Open University, Ahmedabad

Term-End Examination : January-2026

Course Name : BSCCS

Date : 18-02-2026

Subject Name : Object Oriented Programming using C++

Time : 03:00PM TO 05:15PM

Subject Code : BSCCS-203

Max Marks : 70

Section A

Q.-1. Respond to any three of the following questions in brief. (30)

- (1) Discuss the use of references in C++ and compare them with pointers highlighting their advantages and limitations.
- (2) Define a class in C++ and explain how data members and member functions are declared and accessed using objects.
- (3) Explain the role of static data members and static member functions in a class and describe their advantages
- (4) Explain the concept of multilevel and multiple inheritance and discuss the problems that may arise such as ambiguity.
- (5) Explain the concept of abstract classes and pure virtual functions and discuss their practical applications.

Section B

Q.-2. Write short notes on any four of the following topics. (20)

- (1) Discuss operator overloading and explain how operators can be overloaded using member and non-member functions.
- (2) Explain the concept of inline functions and discuss their advantages and limitations.
- (3) Define function overloading with example.
- (4) List different types of inheritance.
- (5) Define function prototype.
- (6) Define null pointer.

Section C

Q.-3. Choose the correct option (A, B, C, or D). (10)

(1) Object Oriented Programming is mainly based on which concept?

- | | |
|--------------|---------------|
| A) Functions | B) Data |
| C) Objects | D) Algorithms |

(2) Which keyword is used to create a class in C++?

- | | |
|-----------|-----------|
| A) object | B) define |
| C) class | D) struct |

(3) Functions help in?

- | | |
|---------------------|----------------|
| A) Code duplication | B) Code reuse |
| C) Code deletion | D) Code hiding |

(4) Which operator accesses class members using object name?

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

(5) Constructor name must be same as?

- | | |
|-------------|----------|
| A) Object | B) Class |
| C) Function | D) File |

(6) Base class is also called?

- | | |
|------------|-----------|
| A) Parent | B) Child |
| C) Derived | D) Object |

(7) Polymorphism means?

- | | |
|------------------------|------------------------|
| A) One name many forms | B) Many names one form |
| C) Code hiding | D) Code reuse |

(8) Runtime polymorphism uses?

- | | |
|--------------------|---------------------|
| A) Inline function | B) Virtual function |
| C) Constructor | D) Template |

(9) Which header file is used for file handling?

- | | |
|-------------|------------|
| A) iostream | B) fstream |
| C) stdlib.h | D) conio.h |

(10) Which mode opens file for appending?

- | | |
|--------|----------|
| A) in | B) out |
| C) app | D) trunc |

Section D

Q.-4. State whether the following statements are true or false.

(10)

- (1) In OOP, data is more important than functions.
- (2) Private members can be accessed directly using object name.
- (3) The >> operator is used for input in C++.
- (4) Arrays store elements in random order.
- (5) The dot operator is used to access class members.
- (6) A destructor is invoked when an object is destroyed.
- (7) The base class is also called parent class.
- (8) Virtual base classes help avoid ambiguity in inheritance.
- (9) Virtual functions support runtime polymorphism.
- (10) trunc mode deletes previous file contents.
