

TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF COMPUTER APPLICATIONS (MCA)
EXAMINATION : DECEMBER - 2025
SEMESTER - II

Sub : Object Oriented Programming using C++ (MCA- 203-22)

Date : 31/12/2025

Total Marks : 60

Time: 10.00 am to 12.30 pm

Instruction:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagram wherever necessary.

Q. 1. Answer the following in 2 - 3 lines. (Any 5) (10)

1. What is the use of friend function?
2. What are the standard stream operators of C++?
3. What is meant by catchall()?
4. What do you mean by "this" function?
5. What is scope resolution operator? Write its Uses?
6. What is data encapsulation?
7. Compare the features of object oriented programming with procedure oriented programming

Q. 2. Answer the following in short. (Any 4) (20)

1. What is operator overloading? List the operators that cannot be overloaded and justify why they cannot be overloaded
2. Explain about exception handling in C++.
3. Explain access specifiers in class
4. With an example, explain the use of inline function
5. Write about pure virtual function with example
6. write notes on overloading new operator and delete operator

Q. 3. Answer the following in detail. (Any 3) (30)

1. What are the different forms of inheritance supported by C++? Explain with examples any two types
2. Write a C++ program for the following specification.
 Class: AddressBook
 Data Members: Name, Address, PhoneNo, Email.
 Member functions: InsertData (), DisplayData (), SearchPhNo().
3. Write a C++ program to implement function overloading
4. What are the various types of constructors? Give an example for each. Whether constructors could be overload? Justify your answer through an example
5. Write a program using a try block to detect and throw an exception if the conditions "divide-by-zero" occurs
