

TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF SCIENCE (M.SC) IN COMPUTER APPLICATIONS
EXAMINATION : DECEMBER - 2024
SEMESTER - II

Sub: Object Oriented Programming (C++) (MSC 201-22)

Date : 31/12/2024

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 diagrams wherever necessary.

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

1. Difference between object oriented programming and procedure oriented programming
2. State the use of scope resolution operator and its use in C++.
3. What is function prototype?
4. What's the difference between public, private, and protected?
5. What is 'this' pointer?
6. What are the functions in C ++ to manipulate file pointers?
7. State use of new and delete operator in c++.

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

1. What is copy constructor? When it is used implicitly for what purpose?
2. Explain virtual function with example?
3. What is a Friend function? Describe their benefits and limitations? Give Suitable example.
4. What is meant by function overloading? Write the rules associated with Function overloading. Give suitable example?
5. How Exceptions are handled?
6. Write a programme in c++ using constructor to create the data of the employee and using destructor destroy this data.

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

1. Write a C++ program to overload '+' operator.
2. Define a class to represent a BANK ACCOUNT. Include the following members – a) Name of the depositor, b) Account number, c) Type of account, d) Balance amount in the account. To Provide the member function to perform the following tasks. To assign initial values To deposit an amount To withdraw an amount after checking the balance

3. What is inheritance? Explain any two type of inheritance.
 4. Explain concepts of object oriented programming.
 5. Design a base class called shape. Use this class to store two double type values that could be used to compute the area of figures. Derive two specific classes triangle and rectangle from the base class shape. Add to the base class a member function getdata() to initialize base class members and another member function display area() to compute and display the area of figures
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