

Course
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Test Series

Exam Paper for Polymorphism in C Plus Plus

Time: 45 Minutes

Marks : 50

Note: All questions are compulsory

Section A(5*1=5)
MCQ Questions

Ques 1: Polymorphism in C++ is mainly implemented through:

- a) Function overloading and operator overloading
- b) Inheritance and virtual functions
- c) Encapsulation and abstraction
- d) Templates and macros

Ques 2: Polymorphism in C++ is mainly implemented through:

- a) Function overloading and operator overloading
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Ques 3: Which keyword is used to overload an operator in C++?

- a) operator
- b) overload
- c) virtual
- d) friend

Ques 4: Operator overloading allows:

- a) Changing the meaning of existing operators
- b) Creating new operators
- c) Both a and b
- d) None of the above

Ques 5: Which of the following can be used to differentiate overloaded functions?

- a) Number of parameters
- b) Type of parameters
- c) Order of parameters
- d) All of the above

Section B(5*5=25)
Descriptive Questions

Ques 6: Differentiate between compile-time and runtime polymorphism with suitable examples.

Ques 7: Define function overloading. Why is it needed in C++?

Ques 8: What are the advantages of function overloading in software design?

Ques 9: Define operator overloading. Why is it useful in C++?

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Ques 10: What is the difference between function overriding and function overloading?

Section C(1*20=20)
Practical Questions

Ques 11 :

(a) Write a C++ program to demonstrate runtime polymorphism using virtual functions and base class pointers. (20 Marks)

Instructions:

1. Create a base class Shape with a virtual function area().
2. Derive two classes: Rectangle and Circle.
3. Override the area() function in both derived classes.
4. Use a base class pointer to call the area() function for both derived objects.
5. Display the result of each area calculation.

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