

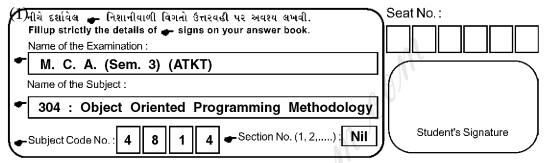
RF-4814

M. C. A. (Sem. III) (ATKT) Examination April/May - 2010

Paper - 304 : Object Oriented Programming Methodology

Time: 3 Hours] [Total Marks: 70

Instructions:



1 Attempt any two:-

14

- (a) Explain abstraction and encapsulation as characteristics of object oriented languages. How these characteristics are supported by C++?
- (b) Explain cin and cout. Discuss stream class hierarchy in C++.
- (c) What is reference variable? Explain call by reference in C++ with proper example.

2 Attempt any two:

14

- (a) Define polymorphism. Explain run-time polymorphism.
- (b) What is virtual base class? Give an example to explain usage of virtual base class.
- (c) Explain templates in C++ giving proper example.

3 Attempt any two:-

14

- (a) Explain friend function class in C++.
- (b) What is inline function? Explain advantages and limitations of inline faction.

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(c) Explain function overriding and function overloading.

4 Do as directed:-

14

- (a) Write a program in C++ to overload '+' operator for string concatenation.
- (b) Define destructor. Write a program in C++ to illustrate usage of destructor.

5 Attempt any two:-

14

- (a) Define manipulators. How can you create and use user define manipulators?
- (b) Explain new and delete operator. Differentiate new and malloc () function.
- (c) Describe multiple and multi level inheritance with suitable examples.

