



**MCA DEGREE EXAMINATIONS: MAY 2015**

(Regulation 2009)

Second Semester

**MASTER OF COMPUTER APPLICATION**

MCA506 : Object Oriented Programming

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 10 Marks)**

1. Define class and objects.
2. What is data encapsulation? How security is achieved using encapsulation?
3. Why is friend concept controversial to OOP concepts?
4. Define static data member.
5. Why should default argument function have default values from right to left?
6. Differentiate between constructor and destructor.
7. What is the difference between the access specifiers private and protected?
8. Define generic programming. How does it achieve in C++?
9. What is the difference between ASCII and binary file?
10. What are container classes?

**PART B (5 x 16 = 80 Marks)**

11. a) What is a programming paradigm? Explain the evolution of programming paradigms. How does object oriented programming differs from traditional programming?

**(OR)**

- b) Discuss the difference between structures and objects with an example. Describe the uses of scope resolution operator and reference operator.

12. a) Write short notes on the following:
- i. Inline function
  - ii. Static functions
  - iii. Friend function
  - iv. Dynamic allocation

**(OR)**

- b) Create a class Alpha with 'a' as its data member and class Beta with 'b' as its data member. Write a friend function to find the largest of a and b.

13. a) What is constructor? Explain the purpose of writing copy constructor with an example.

**(OR)**

- b) Overload the operators unary – and binary + operator for the class complex with real and imaginary as its data members.

14. a) Illustrate with an example different types of inheritance in C++

**(OR)**

- b) What is exception handling? Write about the various constructs for exception handling in C++.

15. a) Draw the class hierarchy of ios and explain all its derivatives.

**(OR)**

- b) Write briefly about STL in C++. Explain the libraries of String class.

\*\*\*\*\*