ELECTIVE PAPER III – A

OBJECT ORIENTED PROGRAMMING WITH C++
(for the candidates admitted from the academic year 2010-11 onwards)

UNIT I
Structure of C++ Program – Tokens – Keywords – Identifiers and constant basic data types – user defined data types – derived data types – symbolic constants – type compatibility – declaration of variables – dynamical initialization of variables – reference variables – operator in C++ - scope resolution operators – the main function – function prototyping – call be reference – inline functions – default arguments.

UNIT II
Function overloading – Math library functions – specifying a class – defining member functions – a C++ program with class – making an outside function Inline- Nesting of member functions – Static Data members – Static member functions – Friendly functions.

UNIT III
Constructions – Parameterized constructions – Multiple constructors in a class - Constructors with Default Arguments – copy constructor – Dynamic Constructors – Destructors – Defining Operator Overloading – Overloading unary operators – Overloading Binary operators – Rules for overloading operators.

UNIT IV
Inheritance : Defining derived classes – single Inheritance - Multilevel inheritance – Multiple Inheritance - Hierarchical Inheritance – Hybrid Inheritance – Pointers to Objects - This Pointer – Pointers to Derived Classes.

UNIT V
Virtual functions – Pure Virtual functions – C++ streams – C++ Stream classes – unformatted I/O operations – Formatted console I/O operations – Managing Output with manipulators – Designing our own manipulators.

Books for reference
Text Book
1. "Object Oriented Programming with C++" by E. Balagurusamy, Second Edition.
2. Programming with C++, John R. Hubbard, II Edition 2002, TMH Publications.