

Program – B.Sc(IT)

PROGRAM: BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY			
REGULATION: BSC(IT)-2007-REGULAR			
SEMESTER : 1 Yr.			
ENGLISH-1	1010103	1010103	Y
ADVANCED ENGLISH	1010107	1010107	N
TAMIL-I	1010209	1010209	N
HINDI-I	1010304	1010304	N
FOUNDATION COURSE IN HUMANITIES AND SOCIAL SCIENCE	1020301	1020301	Y
ALLIED 1: COMPUTER ORIENTED PROGRAMMING	1050101	1050101	Y
PASCAL AND DATA STRUCTURE	1050123	1050123	Y
PRACTICAL 1: PASCAL PROGRAMMING	1050125	1050125	Y

Course code: **1050123**

PASCAL AND DATA STRUCTURES

UNIT I:

Data types – Operators and statements – Structure of Pascal program – Statements – Comment – Input / Output statements – Formatting output data – Simple programs – Control statements.

UNIT II

Procedures and functions – Arrays – Records- Enumerated data types – Subranges and sets – files and pointers.

UNIT III

Definition of a data structure – Primitive and composite data types – Basic concept of Arrays – Structure – Representation of arrays – Fundamentals of stack and queue – Operations on stack and queue – Implementation of stack and queue (using arrays) – evolution of expressions – Circular queue.

UNIT IV

Linked list operations – Linked stacks and queues – Polynomial addition – Circular lists – Doubly linked list – Operations on Doubly linked list.

UNIT –V

Trees and Graphs : Basic Terminology – Binary Trees – Conversion of Forest to Binary Tree – Tree Traversals. Graph : Definition – Types of Graphs – Graph Traversal – Shortest path (Dijkstra's Algorithm)

Text Books

1. Programming with Pascal – D.Ravichandran TMH., 1998.
2. Pascal Plus Data Structures Algorithms and Advanced programming – Neli Dale and Susan C. Lilly, TMH.

COMPUTER ORIENTED PROGRAMMING

UNIT-I

Introduction to computers – classification of Digital computer systems – Number system – Memory units – auxiliary storage device – Input/Output device – Operating system – Hardware and Software.

UNIT-II

C Programming:

Evaluation and application of C – Structure of C program – Data Types – Declaration – Operators – Expressions – type conversion – Built in functions – Data Input and Output – control Statements.

UNIT-III

Functions: Defining and accessing arguments – Recursive functions – Storage Classes – Arrays: Defining and Processing arrays – passing arrays to function – arrays and string – string functions – string manipulation.

UNIT-IV

Pointers – Pointer declarations – Operation on Pointers – Pointers to function – Pointer and arrays – arrays of pointers – Structure and pointers – Union.

UNIT-V

Files: Opening, closing and processing files – files with structures and unions – Bitwise operations – Macros – Preprocessors.

DESIGN CONCEPTS

Role of classes - Relationship between classes - Class interface - Components - Study of typical Object Oriented systems.

TEXT BOOKS:

1. Introduction to computer science- Satish Jain, BPB publications 1990.
2. Fundamentals of computers-V.Rajaram, Prentice Hall publications.
3. Introduction to C – Balagurusamy.
4. Bjarne Stroustrup, “The C++ Programming Language”, III Ed., Pearson Education 2000
5. Balagurusamy. E, “Object Oriented Programming with C++”, TMH
6. Barkakati N, “Object Oriented Programming in C++”, PHI, 1995.

PROGRAM: BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY
SECOND YEAR
MAJOR 2: OBJECT ORIENTED PROGRAMMING AND C++
ALLIED 2 : FINANCIAL AND COST ACCOUNTING
PRACTICAL 2 : OBJECT ORIENTED PROGRAMMING AND C++
TAMIL –II
ENGLISH – II
ADVANCED ENGLISH - II
HINDI – II
FOUNDATION COURSE IN SCIENCE AND TECHNOLOGY

OBJECT ORIENTED PROGRAMMING AND C++

UNIT I:

Introduction to Object Oriented Programming – Basic concepts – Benefits of OOP, Object Oriented Languages – Application of OOP.

UNIT II:

C++ : Introduction – Identifiers and keywords – data types – constants – operators – Type conversion – Variables – Statements – Feature of iostream.h – Manipulators – I/O stream flags – control statements.

UNIT III:

Functions and program structures – Arrays – Pointers – Structures – Union and Bit fields.

UNIT IV:

Classes and Objects – Constructors – Destructors – Inline member functions – Static class members – Friend functions – Dynamic Memory allocations - Inheritance – Overloading.

UNIT V:

Polymorphism – Templates and exception handling – data file operations.

TEXT BOOKS:

1. Object Oriented Programming C++, Balagurusamy, T.M.H. (Unit I)
2. Programming with C++, D.Ravichandran, T.M.H.

REFERENCE BOOKS:

1. Programming with C++ , Schaum's outline series, T.M.H.
2. Teach yourself C++, Herbert Schildt, T.M.H., 3rd Edition, 1998.

Paper – 8**FINANCIAL AND COST ACCOUNTING****UNIT I**

Definition and functions of accounting – accounting concepts- objectives of accounting – accounting principles- journal- ledger- trial balance

UNIT II

Subsidiary books- cash book- final accounts and its adjustments.

UNIT III

Cost accounting- meaning- objectives- nature and scope- relationship between management accounting, cost accounting and financial accounting. Budgets and budgetary control- preparation of cash budget and flexible budget

UNIT IV

Fund flow analysis and cash flow analysis

UNIT V

Marginal Costing – absorption costing- practical application of marginal costing
technique in different situations- P/V ratio- B.E.P- margin of safety