Stat-124: Introduction to Computer and Computer Programming
100 Marks: 03 Credits
Number of Class: 35-40

Introduction: Structure, History, Characteristics and Functions of Computer, Criteria of Powerful Computer, Classifications and Generations of Computer, Computer System.

Number System: Basic Concept, Binary, Octal, Decimal and Hexadecimal Number System, Conversion of Data Using Number System.

Processing Data: Parts of Computer Hardware, Presentation of Data by Computers, Computers, Bits and Bytes, Text Codes Data, CPU-Control Unit. Arithmetic/logic Unit and Registers, Factors Affecting the Processing Speed of Computer, Memory: Main and Auxiliary Memory, Storage Devices.

Operating System: Meaning of Operating System, Functions of Operating System PC Operating System: DOS, LINUX, Windows NT, Windows 2000 Windows XP.

Task oriented Software's (Spreadsheet and Word Processing): Microsoft Excel: Overview of Excel, Starting Excel, Creating Charts and Graphs Customizing, Data analysis, Editing Workbooks, File Management, Formatting, Formula and Function Management. Starting MS-Word, File Management, Formatting, Customizing, Graphics, Large documents and Tables.

Programming: Meaning, Algorithms, Flow Charting, Idea of Different Programming Languages.

FORTRAN 95 Language: Character Sets, Variable Names, Statement (Executable and Non-executable, Type Declaration, Assignment, OPEN, STOP, END), Operators (Arithmetic, Logical, and Relational), Expressions, List-directed READ/WRITE Statement, FORMAT, Directed READ/WRITE Statements, Edit Descriptions, and Vertical control of Output.

FORTRAN Built-in Functions, Transfer (Unconditional and Conditional) Statement, Control Statements, One, Two, and Higher Dimensional Arrays.

Programming C: Introduction, Importance of C, Sample C Programs, Basic Structure of C Programs, Programming Style, and Executive of C Program.

Text

1. Norton, P. (2006-2007): *Introduction to Computers*, 6th edition, Tata McGraw-Hill, New Delhi.
2. Hammand, R. H., Rogers, W. B. and Crittenden, T. B. (1987): *Introduction to Fortran 77 and the Onal Computer*, McGraw Hill, New York.

References

1. Blattner, P. and Ulrich, L. (2000). Microsoft Excel 2000. Prentice-Hall, India.
2. Byron S. Gottfried, (2005): *Theory and Problems of Programming With C*. 2nd edition.
3. Courter, G. and Marquis, A., (1999): *Mastering Microsoft Office 2000*, Professional Ed. 1999, John Wiley and Sons.
4. Gallo, A. M. and Nenno, R. B. (1985): *Computers and Society with Basic and Pascal*, Prindle, Weber and Schmidt, Boston.

5. Laley/Fujitsu Fortran 95 Language Reference (2008): *Laley Computer System*, Inc. Nv (Internet Edition).
6. Rajaraman, V. (1999): *Fundamentals of Computers*, Prentice –Wall.