

# COMPUTER SKILLS

## UNIT I

**COMPUTER BASICS:** Model of Computer and its Parts-Representation of Characters in Computers-Representation of Integers-Representation of Fractions-Hexadecimal Representation of Numbers-Decimal to Binary Conversion-Error detecting codes.

**INPUT/OUTPUT UNITS** Description of Computer Input Units-Other Input Methods-Computer Output Units-Computer Memory: Memory cell-Memory organization-Read Only Memory-Serial Access Memory-Physical Devices Used to construct Memories-Magnetic Hard Disk-Floppy Disk Drives-Magnetic Tape Drives.

**PROCESSOR:** Structure of Instructions-Description of Processor-A Machine Language Program-An Algorithm to Simulate a Hypothetical computer.

**BINARY ARITHMETIC:** Binary addition-Binary subtraction-Signed Numbers-Two's Complement Representation of Numbers- Addition/Subtraction of Numbers in 2's Complement Notation-Binary Multiplication-Binary Division-Floating Point Representation of Numbers-Arithmetic Operations with Normalized Floating Point Numbers.

## UNIT II

**LOGIC CIRCUITS:** Introduction-Switching Circuits-AND/OR Operation-NOT operation-Boolean Functions-Postulates-Duality Principle-Theorems-Precedence of Operators-Venn Diagram-Truth Tables-Canonical forms of Boolean Functions-Logic Circuits-Parallel and Serial Adders-Physical Devices Used to Construct Gates-Transistors-Integrated Circuits.

**COMPUTER ARCHITECTURE:** Interconnection of Units-Processors to Memory Communication-I-O to Processor Communication-Interrupt Structures-Multiprogramming-Processor Features-Virtual Memory.

**COMPUTER LANGUAGES:** Why Programming Languages-Assembly Language-High Level Programming Languages-Some High Level Programming Languages.

**OPERATING SYSTEMS:** Why do we need an Operating System-Batch Operating System-Multiprogramming Operating System-Time Sharing Operating System-On-line and Real Time Operating System.

## UNIT III

**MICROCOMPUTERS:** An Ideal Microcomputer- An Actual Microcomputers-Memory Systems for Microcomputer- A Minimum Microcomputer

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Configuration-Evolution of Microcomputer-Special purpose Microcomputer Software-General Purpose Software for Microcomputer-Special Purpose Applications of Microcomputers.

COMPUTER GENERATIONS AND CLASSIFICATION: First Generation of Computers-The Second Generation Computers-Third Generation Computers-The Fourth Generation Computers-The Fifth Generation Computers-Classification of Computers.

COMPUTERS AND COMMUNICATIONS: Types of Communications with and Among Computers-Need for Computer Communication Networks-Characteristics of Communication Channels-Allocation of Channels-Physical Communication Media-Establishing Channels for Communication-Computer Network Topologies-Communication Protocol

#### UNIT IV

INTRODUCTION TO INTERNET: Introduction-Evolution of Internet-How Big is Internet-Transmission Protocol Used Over Internet-Definition of Internet-Connecting to Internet-How to Get An Internet Account.

E-Mail: Introduction-E-Mail Program-E-Mail Address-Who Allots the Domain Names-Domain Name System-Using E-Mail-Activating E-Mail Program-E-Mail Operation.

WORLD WIDE WEB: Introduction-What is WWW-Linking of Documents in WWW-Uniform resource Locator (URL)-Who Puts Up Websites-Websites- A Versatile Means of Information Dissemination-Major Categories of Websites over Internet-Instructional Websites-Business Websites-Tourism Industry Websites-Entertainment Industry Websites-Browsing the web-Starting the Browser-Getting and Viewing the Document- Browser Operations-Searching for Information.

#### Text Books

- 1) Title: Fundamentals Of Computers  
Author: V.Rajaraman  
Publisher: Prentice-Hall of India Limited, New Delhi.
  
- 2) Title: Let's Learn Internet  
Author: M.K.Goel  
Publisher: Sterling Publishers Private Limited, New Delhi