

Department of Technical Education
Diploma in Computer Science and Engineering / Information Science and Engineering
I Semester

Subject: 9CS14 Introduction to Computer Concepts
Contact Hrs / Week: 4 **Contact Hrs / Semester: 96**

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SECTION I

1 Introduction to Computers

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 - 1.4.2 Second Generation(1956-63): Transistors
 - 1.4.3 Third Generation(1964-Early 1970s): Integrated Circuits
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 - 5.1.9 Digital Camera
 - 5.1.10 Scanners (handheld and Flatbed Scanners)
 - 5.1.11 Optical Scanners(OCR,OMR,MICR,barcode Reader)

SECTION III

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Output Devices

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- Introduction
- 6.2 Classification of Output
 - 6.2.1 Hard copy Versus Soft copy
- 6.3 Hard copy output Devices
- 6.4 Printers
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- 6.6 Soft copy Output devices
- 6.7 Monitors
 - 6.7.1 CRT
- 6.8 Audio Output
- 6.9 Terminals

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Computer Program

- 7.1 Introduction
- 7.2 Developing a Program
 - 7.2.1 Program Development Cycle

- 7.3 Algorithm
 - 7.3.1 Examples on Algorithms (Wide coverage)
 - Conversion of Temperatures (fahrenheit to degree celcius & vice-versa,)
 - Area & Circumfernece of circle,Largest of 3 Nos, Sum & Avg of 3 Nos.,
 - No odd or even, Print all nos divisibe by 7,
 - sum of digits reducing it to single digit,Prime property,factoiral of given number
- 7.4 Flowchart
 - 7.4.1 Importance of Flowchart
 - 7.4.2 Flowchart Symbols
 - 7.4.3 Guidelines for Preparinng Flowcharts
 - 7.4.4 Flowchart structures
 - 7.4.5 Limitations of Flowcharts
 - 7.4.6 Examples on flow charts (wide coverage—on alogrithm discussed above)
- 7.5 Pseudocode(P-code)
 - 7.5.1 Why Pseuduocode?
 - 7.5.2 Pseuduocode Structure
 - 7.5.3 Pseuduocode Guidelines
- 7.6 Program Testing and Debugging(syntax and Logical Errors)
- 7.7 Characteristics of good Program

SECTION IV

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Computer Languages & Software

- 8.1 Introduction to Computer Languages
- 8.2 Evolution of Programming Languages
- 8.3 Classification & Generation of Programming Languages
- 8.4 Features of a Good Programming languages
- 8.5 Selection of a Programming Languages
- 8.6 Introduction
- 8.7 Software Definition
- 8.8 Relationship between software and Hardware
- 8.9 Software Categories
- 8.10 system software
 - 8.10.1 System Management Programs
 - 8.10.2 System Development Programs
- 8.11 Application Software
- 8.12 Software Terminology

SECTION V

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Basics of Computer Networks & Internet

- 9.1 Introduction
- 9.2 LAN,MAN,WAN
- 9.3 Network Topologies(bus,ring,star,tree,mesh)
- 9.4 Introduction to Internet
- 9.5 Evolution
- 9.6 Internet organization and commities
- 9.7 Basic Internet Terms
- 9.8 Getting Connected to Internet
 - 9.8.1 Types of Internet Connection
 - 9.8.2 Internet Software
- 9.9 Internet Applications
- 9.10 E-mail
- 9.11 How E-mail works
- 9.12 Searching the web(search Engines)
- 9.13 Internet and viruses

10	Multimedia
10.1	Introduction
10.2	Multimedia:definition
10.3	Building bloks of multimedia
10.4	Multimedia system
10.5	Multimedia Application
10.6	Virtual Reality

Text Book : 1. Introduction to Computer Science - ITL Education Solutions Ltd, Pearson Education.

Reference Books :

2. Introduction to Computers - By Peter Norton's 4th Edition Tata McGraw Hill
3. Fundamentals of Computers - V Rajaram

Online Resources:

- www.pearsoned.co.in/ITLEducationSolutionsLimited
www.howstuffworks.com

Table of Specifications :

SECTION	TOPIC	HRS ALLOTED	Marks
I	1. Introduction to Computers	04	10
	2. Number Systems	04	10
	3. Primary Memory	04	10
II	4. Secondary Storage	06	15
	5. Input Devices	08	20
III	6. Output Devices	08	20
	7. Computer Program	10	20
IV	8. Computer Languages & Software	06	15
V	9. Basics of Computer Networks & Internet	06	15
	10. Multimedia	04	10
	Tests and Assignment	04	
	TOTAL	64	145

General Objectives :

After the completion of the study of this subject students should be able to

- Know the basic structure of a computer
- Appreciate the working of a computer
- Understand the Number Systems
- Understand the concepts and functions of I/O Units and Computer memory
- Know the basic structure of Computer Programs
- Appreciate the features of programming languages
- Know the concepts of computer networks, Internet & Multimedia

Specific Objectives :

After the completion of the study of this subject students should be able to

- Explain the working of a computer
- Analyse how problems can be solved using computers
- List the characteristics and applications of computers
- List the advantages and disadvantages of using computers
- Describe how character, integers and fractions are represented in computers
- Explain the working of various I/O devices
- Distinguish various types of memories
- Explain how data are stored in various memories
- Explain developing a program using Algorithms & Flow Charts
- Learn basic concepts of program testing & debugging
- Categorize Programming languages
- Appraise features of good programming languages
- Distinguish between hardware & software
- Categorise softwares
- Learn the basic of Computer networks & topologies
- Summarize the basic concept of Internet & Applications
- Appraise working of E-mail & web searching
- Discuss the building blocks of Multimedia system
- Appraise the Multimedia Applications