STUDY & EVALUATION SCHEME

Diploma in Engineering – Second Year
Branch – Computer Science & Engineering

Year – II[nd]
Semester – III[rd]

S. No.	Subject Code	Subject	Periods			Evaluation Scheme				Subject Total
						Sessional			Exam.	
			L	T	P	CT	TA	Total	ESE	
Theory Subjects										
1.	DMA-301	Applied Mathematics – II(A)	03	01	00	30	20	50	100	150
2.	DCS-302	Operating System	03	01	00	30	20	50	100	150
3.	DCS-303	Data Structure Using C	03	01	00	30	20	50	100	150
4.	DCS-304	Computer Hardware & Maintenance	03	01	00	30	20	50	100	150
5.	DCS-305	Principle of Programming Language	03	01	00	30	20	50	100	150
6.	DCS-306	Basic Electronics	03	01	00	30	20	50	100	150
Practical Subjects										
1.	DCS-352	Operating System Lab	00	00	02	10	10	20	30	50
2.	DCS-353	Data Structure Using C Lab	00	00	02	10	10	20	30	50
3.	DCS-354	Computer Hardware & Maintenance Lab.	00	00	02	10	10	20	30	50
4.	DCS-356	Basic Electronics Lab	00	00	02	10	10	20	30	50
5.	GP-351	General Proficiency	-	-	-	-	-	50	-	50
		Total	**18**	**06**	**08**	-	-	-	-	**1150**

APPLIED MATHEMATICS-II (A)
(DMA-301)
(Common to All Diploma Engineering Courses)

L T P

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UNIT-1 [10]

Matrix-I

Type of matrix: Null matrix, unit matrix, square matrix, symmetric and skew-symmetric matrix, orthogonal matrix, diagonal and triangular matrix, Hermitian and Skew-Hermitian matrix, unitary matrix.

Algebra of Matrix: Addition, subtraction and multiplication.

Determinant of matrix, cofactor of matrix, computing inverse through determinant and cofactor.

Elementary row/column transformation: meaning and use in computing inverse of matrix.

UNIT-2 [8]

Matrix-II

Linear dependence/independence of vectors. Definition and computation of rank of matrix through determinants, elementary row and column transformation (Echelon and Normal form of matrix), consistency of equations.

UNIT-3 [6]

Eigen Values and Eigen Vectors, Cayley-Hamiltom Theorem

Definition and evaluation of Eigen values and Eigen vectors of a matrix of order 2 and 3. Cayley-Hamilton theorem (without proof) and its verification, use of Cayley-Hamilton theorem in finding inverse.

UNIT-4 [8]

Ordinary Differential Equation

Introduction, formation, order, degree of ordinary differential equation. Formation of ordinary differential equations through physical, geometrical, mechanical, electrical consideration.

Solution of differential equations of first order and first degree by variable separable, reducible to variable separable forms, linear and Bernoulli form and exact differential equation.

UNIT-5 **[8]**

Second Order Differential Equation

Properties of solution, linear differential equation of second order with constant coefficients, complimentary function and particular integral, equation reducible to linear form with constant coefficients.

Simple Applications

LCR circuit, Motion under gravity, Newton's law of cooling, Radioactive decay, Population growth, Oscillations of a string, Equivalence of electrical mechanical system.

References:

1. Applied Mathematics: Kailash Sinha, Meerut publication.
2. Applied Mathematics: P.K Gupta, Asian Publication.
1. Applied Mathematics: H.R Luthra, Bharat Bharti Prakashan.

Operating System
(DCS-302)

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UNIT-1 **[8]**

Introduction

Evolution of Operating System, Computer system overview, characteristics of operating system, GUI, CUI, Single user,Multi user operating system Time Sharing and Real Time System.

UNIT-2 **[6]**

Management of Operating System:
Process Management - Process concepts, Process scheduling, Process Synchronization, Inter process communication, CPU scheduling and dead lock.

UNIT-3 **[10]**

Memory Management - Main memory, Contiguous memory allocation, Segmentation, Paging, Virtual memory, Demand paging, Page replacement, Allocation, Thrashing.

UNIT-4 **[6]**

Input Output Management - Mass storage structure, Overview, Disk scheduling and Management.

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UNIT-5 **[10]**

File Management - File concepts, File system and structure, Directory structure.
Linux /UNIX and Windows basic concepts, system administration, requirement for Linux.

Reference Book

1. Milenekovie - Operating System Concept - McGraw Hill
2. Petersons - Operating System - Addision Wesley
3. Dietal - An Introduction to Operating System- Addision Wesley

Data Structure Using C
(DCS-303)

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UNIT-1 **[5]**

BASIC CONCEPTS:

Basic concepts and notation & Mathematical background.

UNIT-2 **[10]**

Arrays

Concept of Arrays, Single dimensional array, two dimensional array, Storage strategy of multidimensional arrays, Operations on arrays with Algorithms (searching, traversing, inserting, deleting)

UNIT-3 **[10]**

Stacks, Queues, Lists and Recursions:

Representation of stacks & queues, linked sequential. List representation techniques, multilinked structures, Dynamic storage allocation techniques, Recursion.

UNIT-4 **[7]**

Sorting and Searching: - Introduction, Search algorithm (Linear and Binary), Sorting algorithms (Bubble Sort, Insertion Sort, Selection Sort, Merge Sort, heap sort).

UNIT-5 **[8]**

Tree and Graph

Definitions and basic concepts, Linked tree representations, binary tree traversal algorithms-trees and their applications.

Graphs: Terminology & Representations, Graphs & Multi-graphs, Directed Graphs. Depths-first-search

Reference Books

1. Data Structure - Schaum's Outline Series - McGraw Hill
2. Data Structure - Schaum's Series - McGraw Hill Publications
3. Horwitz and Sartaj Sahni - Data Structure
4. Kanekar Yashwant - Data Structure through C, BPB Publication

Computer Hardware & Maintenance
(DCS-304)

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UNIT-1 **[9]**

Component and peripheral devices, Connected with computer.

Mother Board: BUS, Mother board components, Battery, Connections on the Mother Board, Keeping CPU cool, Mother board trouble shooting.

Key Board: Switches, Keyboard organization, Key board type trouble shooting.

UNIT-2 **[8]**

Mouse: Mouse type, Connecting Mouse, Trouble shooting Mouse.

HDD: Magnetic recording, Data Encoding Method, HDD feature, Head barking, HDD trouble shooting.

UNIT-3 **[9]**

Compact Disc Drive: CD-R, CD-W, CD-RW, DVD-R, DVD-RW, Blue Ray. Working and Maintenance.

Printers: Image formation method, Printing mechanism, DMP, Ink Jet, Laser Printer, Multi functional printer. How printer works and Trouble shooting.

UNIT-4 **[7]**

Network Devices: Hub, Switch, Router, Bridge, Gateway,

Ethernet Card. Scanner- Flat Bed.

UNIT-5 **[7]**

External Devices- Pen Drive, Flash Drive, External Hard Disk.

Power Supply: Operating characteristics, Types and maintenance.

References Books:

1. Computer Hardware and maintenance by Butterwoth-Heinemann Newton
2. Computer Peripherals and Interfacing by Er. Neha Dutta -S.K. Kataria & Sons

Principle of Programming Language
(DCS-305)

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UNIT-1 **[8]**

Introduction

The Role of Programming Languages: Why Study Programming Languages, Towards Higher-Level languages, Programming paradigms, Programming environments.

UNIT-2 **[8]**

Language Description: Syntactic structure, language Translation Issues: Programming language Syntax, Stages in translation, Formal translation Models

UNIT-3 **[7]**

Language Properties

Modeling Language Properties, Elementary Data Types, Encapsulation, Inheritance, Sequence Control, Subprogram Control

UNIT-4 **[10]**

Programming Paradigms

Imperative Programming: Statements, Types, Procedure Activations Object-Oriented Programming: Grouping of Data and Operations, object oriented programming Functional Programming: Elements, Programming in a typed language, Programming with lists

UNIT-5 **[7]**

Other Programming Paradigm

Logic Programming, Concurrent Programming, Network Programming, Language Description: Semantic Methods

Reference Book

1. "Programming Languages: Design and Implementations", Terrance W.Pratt, Marvin V. Zelkowitz, T.V.Gopal, Fourth ed.,Prentice Hall.
2. Computer Concepts and Programming by Anami, Angadi and Manvi, PHI Publication

Basic Electronics
(DCS-306)

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UNIT I **[8]**

PN Junction Diode: Introduction of Materials (Conductor, Semiconductor & Insulator)
Semiconductor Diode: Depletion layer, V-I characteristics,Mechanism of conduction, diode resistance, capacitance (Transition and Diffusion Capacitance), Diodes breakdown mechanism (Zener and avalanche).
Special Purpose two terminal Devices: ZenerDiodes, Light-Emitting Diodes, Photo Diodes,Varactor (Varicap) Diodes, Tunnel Diodes.
Diode Application: Half and Full Wave Rectifier(Brief Introduction), Zener diode as shunt regulator.

UNIT II **[8]**

Bipolar Junction Transistors: Transistor Construction, Operation (PNP & NPN), Transistor biasing, input output characteristics of Common Base, Common Emitter, Common Collector Configuration, relation between different current components in a transistor, Transistor as an amplifier.

UNIT III **[8]**

Field Effect Transistor:
JFET: Construction and characteristics, equivalent circuit, basic amplifier circuit.
MOSFET: Depletion and Enhancement Type, Transfer characteristic, use of MOSEFT as a switch and as an amplifier, Introduction to C-MOS.

UNIT IV **[8]**

Switching Theory & Logic gates:
Number system, Logic gates, Boolean algebra, Canonical forms, Minimization Of logical function using K-map.

UNIT V **[8]**

Electronic devices in computer system: Power supply (UPS & SMPS), Micro-processor & Micro-controllers and ICs.
Operational Amplifiers: Introduction and Block diagram of Op-Amp, Ideal & Practical characteristics of Op-Amp, Parameters of Op-Amp, Practical Op-Amp Circuits (Inverting Amplifier, Non inverting Amplifier, Unity Gain Amplifier, Summing Amplifier, Subtractor, Integrator and Differentiator).
Electronic Instruments: Digital Multimeter, CRO & its applications.

Refrence Books:

1. Robert L. Boylestand / Louis Nashelsky “Electronic Devices and Circuit Theory”, Latest Edition, Pearson Education.
2. H S Kalsi, “Electronic Instrumentation”, Latest Edition, TMH Publication.

Operating System Lab
(DCS-352)

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1. Installation of operating system
2. Repairing and Removal of operating system
3. Exercise on Windows Latest Version.

Data Structure using C Lab
(DCS-353)

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1. WAP to calculate Sum & average of N numbers.

2. WAP using switch case to find maximum and minimum out of 3 numbers a, b & c.

3. WAP to print all the number between 1 to 100 which are dividing by 9.

4. WAP to find addition of two matrix of n*n order.

5. Sorting programs: Bubble sort, Merge sort, Insertion sort, Selection sort.

6. Searching programs: Linear Search, Binary Search.

7. Array implementation of Stack, Queue, and Circular Queue.

8. Implementation of Stack, Queue.

9. WAP to Tree Traversals.

Computer Hardware and Maintenance Lab
(DCS-354)

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1. Study of devices on motherboard
2. Study of Key board & Keyboard decoder
3. Study of Video Adopter & display controllers
4. Study of Floppy Drive, CD Drive and Hard Disk.
5. Study of Multifunction Input/output controllers
6. Troubleshooting & repair of following equipment
7. Dot Matrix Printer, Laser, Inkjet Printer.
8. Digital Plotter
9. C. P. U.
10. Disk Drive
11. Study and Trouble Shooting of
    (I) Network (II) Power Supplies.

Basic Electronics Lab
(DCS-356)

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List of Experiments:

1. To Identify electronic devices and common passive components: such as Diodes (Rectifier, Zeners, Signal Diodes, Varacter diode, etc.); LED's; Transistors; ICs; Resistors, Capacitors, (Colour code for them); Inductors, Transformers.
2. To Plot characteristics (FB/RB) of Semiconductor diode.
3. To Plot characteristics (FB/RB) of a Zener diode.
4. Observe the output wave of a half wave rectifier circuit with/without shunt capacitor filter.
5. Observe the O/P wave of a full wave rectifier circuit with/without Shunt capacitor filter.
6. To Plot input/output characteristics of a Transistor in CB,CE & CC.
7. To Plot input/output characteristics of a FET.
8. Verification of truth table for 2 input NOT, AND, OR, NAND, NOR, XOR gates.
9. Realization of NOT, OR, AND gates using NAND & NOR gate.
10. Use OP-AMP as inverting and non-inverting amplifier, Use as Adder, Subtractor, Integrator and differentiator.

STUDY & EVALUATION SCHEME

Diploma in Engineering – Second Year
Branch – Computer Science & Engineering

Year – IInd
Semester –IVth

S. No.	Subject Code	Subject	Periods			Evaluation Scheme				Subject Total
						Sessional			Exam.	
			L	T	P	CT	TA	Total	ESE	
Theory Subjects										
1.	DCS-401	Object Oriented Programming with C++	03	01	00	30	20	50	100	150
2.	DCS-402	Wireless and Mobile Network	03	01	00	30	20	50	100	150
3.	DCS-403	Computer Architecture & Micro Processor	03	01	00	30	20	50	100	150
4.	DCS-404	Data Communication & Network	03	01	00	30	20	50	100	150
5.	DCS-405	Web Technology and Multimedia	03	01	00	30	20	50	100	150
Practical Subjects										
1.	DCS-451	Oops with C++ Lab	00	00	02	10	10	20	30	50
2.	DCS-452	Wireless and Mobile Network Lab.	00	00	02	10	10	20	30	50
3.	DCS-453	Computer Architecture & Micro Processor Lab.	00	00	03	10	10	20	30	50
4.	DCS-454	Data Communication & Network Lab.	00	00	03	10	10	20	30	50
5.	DCS-455	Web Technology and Multimedia Lab.	00	00	02	10	10	20	30	50
6.	GP-451	General Proficiency	-	-	-	-	-	50	-	50
		Total	**15**	**05**	**12**	-	-	-	-	**1050**

Object Oriented Programming with C++
(DCS-401)

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Unit-1

Introduction and Features: - Fundamentals of object oriented programming – procedure oriented programming Vs. object oriented programming (OOP). Object oriented programming concepts – Classes, reusability, encapsulation, inheritance, polymorphism, Abstraction.

[8]

Unit-2

Language Constructs: - Review of constructs of C used in C++ : variables, types and type declarations, user defined data types; increment and decrement operators, relational and logical operators; if then else clause, conditional expressions, input and output statement, loops, switch case.

[8]

Unit-3

Classes and Objects: - Class creation, Object accessing class members, Private Vs Public, Constructor and Destructor Objects.

Member Functions: - Method definition, Inline functions implementation, Constant member functions, Friend Functions, Overloading, operator overloading, function overloading, constructor overloading. [**8]**

Unit-4

Inheritance: - Definition of inheritance, Types of inheritance, protected data, private data, public data, inheriting constructors and destructors, constructors and destructors of derived classes, virtual functions.

[**8]**

Unit-5

Polymorphism and Virtual Functions:- Polymorphism, Types of Polymorphism, Virtual functions, pure virtual functions, different operation on the file, creation of file streams, stream classes, header files, updating a file, opening and closing a file.

[**8]**

REFERENCE BOOKS

1. Singh Gurupkar, *Object Oriented Programming using C ++*.
2. John R. Hubbard*, Schaum's Outline of Programming with C++*.
3. Gupta & Gupta*, Object Oriented Programming in C++*., Ishan Publication, Delhi.
4. Rajaram R *, Object Oriented Programming and C++*; New Age International (P) Ltd., Publishers, New Delhi
5. E. Balaguruswamy*, Object Oriented Programming in C++*, TMH Publishing Co. Ltd, New Delhi.

Wireless And Mobile Network
(DCS-402)

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UNIT-1 [8]

Introduction, Difference between wireless and mobile. Brief introduction Generation of mobile (1G/2G/3G/4G), familiar to basic terms like Base station, handoff, MSC, Co-channel Interference, Forward Channel and Reverse channel,
Half and full duplex system, handover.

UNIT-2 [8]

Cellular concepts, Frequency reuse, channel assignment strategies, Handoff strategies (soft and hard handover), Co-channel interference and system capacity, channel planning, Adjacent channel interference ,Improving coverage and capacity in cellular systems(Cell Splitting, Sectoring, Microcell Concept).

UNIT-3 [8]

MOBILE IP-Goal, Requirement, Entities and Terminology, IP packet delivery, agent Discovery, Registration, Optimization, Tunneling and Reverse Tunneling.

UNIT-4 [8]

Aloha, carrier Sense Multiple Access(CSMA/CD), Carrier Sense Multiple Access with collision Avoidance(CSMA/CA), Reservation, polling, token pass, Introduction to Wi-Fi, WI-Max, Bluetooth, ATM, NFC, Paging, GSM and CMDA (basic only).

UNIT-5 [8]

Introduction to Cryptography. Security Attacks. Security Mechanism, Introduction to DES and AES (basic only).concept of public key and private key. Overview of
IP security, digital signature, introduction to virus, worm, logic bomb, rootkit
Flooders, Trojan horse, backdoor, spammer program.

Reference Books

1. Wireless Communication Principles and Practices: Theodore S. Rappaport Pearson Publication.
2. Mobile Communications: JOCHEN SCHILLER, Pearson Education.
3. Introduction to Cryptography: William Stabling, Prentice Hall Publication

Computer Architecture & Microprocessor
(DCS-403)

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UNIT-I 8

Introduction: Digital computer generation, computer types and classifications, CPU and ALU. Introduction to general register organization, bus, memory and Stack organization.

UNIT-II 8

Memory: Types of memory, RAM & ROM. **Input / Output Devices**: Introduction, I/O ports, **Interrupts**: Hardware & Software. **Serial Communication**: Synchronous & asynchronous communication, standard communication interfaces.

UNIT-III 8

Introduction to Microprocessor, Evolution of Microprocessors, Address bus, Data Bus, Control Bus, Bus Structure. The 8085 Microprocessor Unit, Architecture & Description.

UNIT-IV 8

Pin Diagram of 8085, Addressing Modes of 8085, Data Transfer operations (MOV, MVI, OUT, IN), Arithmetic operations (ADD, ADI, SUB, SUI, INR, DCR), Logic Operations (ANA, ANI, ORA, ORI, XRA, XRI), Branch operation (JMP, CALL, RESTART), Writing assembly language programs.

UNIT-V 8

Programming: -Programs: 8-bit Addition, 16-bit Addition, 8-bit Subtraction, 16-bit subtraction, Subtraction with carry, Multiplication & Division.

Reference Book:

1. Carl Hamacher, ZvonkoVranesic and SafwatZaky, “Computer Organization”, Fifth Edition, Tata McGraw Hill, 2002.
2. Microprocessor Architecture Programming & Application with 8085: R.S. Gaonkar, Penram Publication

Data Communication & Network
(DCS-404)

L T P
3 1 0

Unit-1

Networks Basics: - What is network, Network Criteria, Peer-to –peer Network, Client-Server Network, LAN, MAN and WAN, Topologies, Transmission media. **[7]**

Unit-2

OSI Model:- Standards, OSI Reference Model, OSI Physical layer concepts, OSI Data-link layer concepts, OSI Networks layer concepts, OSI Transport layer concepts, OSI Session layer concepts, OSI presentation layer concepts, OSI Application layer concepts.

[9]

Unit-3

Introduction to TCP/IP :- TCP/IP Protocols, Concept of physical and logical addressing, Different Classes of IP addressing, Subnetting and supernetting, IPV4 vs. IPV6.

Network Architecture:- Ethernet Specification and Standardization: 10 mbps (Traditional Ethernet), 100 mbps (Fast Ethernet) and 1000 mbps (Gigabit Ethernet), Concept of Leased Lines and Backbone Lines, Channel allocation

[9]

Unit-4

Network Connectivity: - Network connectivity Devices, NICs, Hubs, Repeaters, Multiplexers, Modems, Routers and Protocols, Firewall, ATM, VOIP, Remote Procedure Call, Connection Management. **[7]**

Unit-5

Application Layer, File transfer, Data access management, Virtual Private Network, Virtual Terminal, internet and public network.

Wireless Networking: - Basics of Wireless, Wireless LAN, Wi-Fi, WiMax and Broadband Wireless and Bluetooth technology, Email.

[8]

Reference Book:

1. B. A. Forouzan - Data Communication and Networking (3 Ed.) -TMH.
2. W. Stallings - Data and Computer Communication (5 Ed.) -Pearson Education/ PHI.

Web Technology and Multimedia
(DCS-405)

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Unit-1 **[10]**

WEB TECHNOLOGY:

HTML:Elements of HTML, HTML sources & Rules of nesting, syntax conventions, HTML Categories, text tags, Formatting WebPages by using Styles, adding pictures, image attribute ,

Introduction to forms, tables and models, advantages & limitations of tables, frames, links. SS cascading style sheets, XHTML, XML, Client Side Scripting, Server Side Scripting, Managing data with SQL.

DYNAMIC WEB PAGES:

The need of dynamic web pages; an overview of DHTML, Cascading Style Sheet (CSS), Comparative studies of different technologies of dynamic page creation.

UNIT -2 **[10]**

JSP:

JSP architecture, JSP servers, JSP tags, understanding the layout in JSP, Declaring variables, methods in JSP, inserting java expression in JSP, processing request from user and generating dynamic response for the user, inserting applets and java beans into JSP, using include and forward action, comparing JSP and CGI program, comparing JSP and ASP program; Creating ODBC data source name, introduction of JDBC, prepared statement and callable statement.

JAVA SCRIPTS:

What is a Java Scripts, adding, Java scripts to documents, embedding java scripts, linking java scripts, creating a page program with scripts?

UNIT -3 **[6]**

Introduction to multimedia, Evolution of Multimedia, Objects of Multimedia, hypertext, hyper graphics, animation, Scope of Multimedia in Business, Multimedia H/W & S/W.

UNIT -4 **[7]**

Multimedia Hardware: OCR, touch-screen, scanners, digital cameras, speakers, printers, plotters, optical disks and drives as CD-ROM and DVD. Multimedia networks, text, sound (MIDI), Audio, and Video. Image and sound file formats, multimedia file formats, compression, standards and techniques, Macromedia products, Basic drawing techniques, multimedia operating systems.

UNIT -5 **[7]**

Multimedia Authoring Tools: - Types of Authoring programmes – Icon based, Time based, object oriented working in macromedia flash, exploring interface using selection of PEN tools. Working with drawing and painting tools, applying colour viewing and manipulating time line, animating, processing, guiding layers, importing and editing sound and video clips in flash.

Reference Book:

1. Patrick Naughton &Herbert Schildt - The Complete Reference Java 2 (Third Edition) -TMH.
2. William Casanova and Molina*, Multimedia An Introduction*; Prentice Hall of India, New Delhi

Oops with C++ Lab
(DCS-451)

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Write programs in C++ for the following:

1. Write General Program in C++
2. Write Program using if, else if , nested if and switch case in C++
3. Write Program using Looping Statement in C++
4. Write Program using if, else if , nested if and switch case in C++
5. Write Program using overloading of various operators in C++
6. Write Program using Friend, Inline, default arguments in C++
7. Write Program using constructor and various types of constructor in C++
8. Write Program using various forms of Inheritance in C++
9. Write Program using virtual functions, virtual Base Class in C++
10. Write Program using function overloading in C++

Wireless & Mobile Network Lab
(DCS-452)

L T P
0 0 2

1. Study of Addressing in TCP/IP.
2. Study of PING Command.
3. To study and Implement Stop and Wait protocol.
4. To study and Implement Data Encryption and Decryption.
5. Study of PC to PC communication using IEEE 802.3.
6. Study the performance of CSMA/CD (Carrier Sense Multiple Access with Collision Detection) Protocol through simulation.
7. Study the performance network with CSMA/CA protocol and compare with CSAMA/CD protocol.
8. Study of Distance Vector Routing algorithm.
9. Study of Link state routing/Dijkistra's algorithm.
10. Study of Data Encryption and Decryption technique.

Computer Architecture & Microprocessor Lab
(DCS-453)

L T P
0 0 3

List of Experiments:

1. To perform addition of two 8 bit numbers using 8085.
2. To perform subtraction of two 8 bit numbers using 8085.
3. To perform multiplication of two 8 bit numbers using 8085.
4. To perform logic AND operation of two 8 bit numbers.
5. To perform logic NAND operation of two 8 bit numbers.
6. To perform logic OR operation of two 8 bit numbers.
7. To perform logic NOR operation of two 8 bit numbers.
8. To perform the division of two 8 bit numbers using 8085.

Data Communication & Network Lab
(DCS-454)

L	T	P
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LIST OF PRACTICALS:

1. . Identification of various networks components- connections, BNC, RJ-45, Cables: Co-axial, twisted pair, UTP- NIC (network interface card).

2. Switch, hub

3. Preparing of networks

4. Establishment of a LAN

5. Use of protocols in establishing LAN

6. Trouble shooting of networks

7. Installation of network device drivers

8. Installation of networks (Peer to Peer Networking, client server interconnection)

9. Use/installation of proxy server

10. Broadband Wireless and Bluetooth technology, Email

Web Technology and Multimedia Lab
(DCS-455)

L	T	P
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1. Exercises related to web sites.
2. Development of different Websites using different tools.
3. Installing and use of various multimedia devices

i. Scanner

ii. Digital camera, web camera

iii. Mic and speakers

iv. Touch screen

v. Plotter and printers

vi. DVD

vii. Audio CD and Video CD

viii. Reading and writing of different format on a frame CD

ix. Transporting audio and video files

x. Using various features of Director

xi. Using various features of Flash

xii. Using various features of Photo-shop

5. Making multimedia presentations combining Director, Flash, Photo-shop, such as department

Profile, lesson presentation, games and project presentations