

E.M. GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE

An Autonomous Institution -Affiliated to Madurai Kamaraj University

Re-accredited (3rd Cycle) with Grade A+ & CGPA 3.51 by NAAC



LESSON PLAN

2023-2024

DEPARTMENT OF COMPUTER SCIENCE

(UG – Odd Semester)



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
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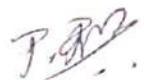
LESSON PLAN
2023-2024

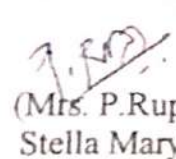

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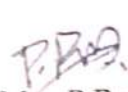
Semester: I

Title of the Paper : Programming in C

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jul'23	I	Unit – I: Overview of C: History of C – Importance of C – Sample Programs – Basic Structure of C Programs– Executing a 'C' Program. Constants, Variables and Data Types: Introduction – Character Set – C Tokens – Keywords and Identifiers – Constants – Variables – Data Types - Declaration of Variables – Declaration of Storage Class – Assigning Values to Variables - Defining Symbolic Constants – Declaring a Variable as Constant - Declaring a Variable as Volatile. Operators and Expressions: Introduction – Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators – Bitwise Operators – Special	I B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Rupy Stella Mary)

		Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operators.				
Aug'23	II	Unit-II: Managing Input and Output Operations: Introduction – Reading a Character – Writing a Character – Formatted Input – Formatted Output. Decision Making and Branching: Introduction – Decision Making with If Statement – Simple If Statement – The If.... Else statement – Nesting of If Else Statements – The Else If Ladder – The Switch Statement – The ?: Operator – The Goto Statement. Decision Making and Looping: Introduction - The while Statement – The do Statement – The for Statement – Jumps in Loops.	IB.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Rupy Stella Mary)
Sep'23	III	Unit-III: Introduction – One-Dimensional Arrays – Declaration of One-Dimensional Arrays – Initialization of One-Dimensional Arrays – Two-Dimensional Arrays – Initializing Two-Dimensional Arrays – Multi-Dimensional Arrays – Dynamic Arrays. Character Arrays and Strings:	IB.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Rupy Stella Mary)

		<p>Introduction – Declaring and Initializing String Variables</p> <ul style="list-style-type: none"> – Reading Strings from Terminal - Writing Strings to Screen – Arithmetic Operations on Characters – Putting Strings Together – Comparison of Two Strings – String-Handling Functions. 				
Oct'23	IV	<p>Unit-IV:</p> <p>User-Defined Functions:</p> <p>Introduction – Need for User-Defined Functions – A Multi-Function Program – Elements of User-Defined Functions – Definition of Functions – Return Values and Their Types – Function Calls – Function Declaration - Category of Functions – No Arguments and No Return Values –Arguments and but No Return Values – Arguments with Return Values – No Arguments and but Returns a Value – Nesting of Functions – Recursion – Passing Arrays to Functions –Searching and Sorting—Passing Strings to Functions- The Scope, Visibility and Lifetime of Variables. Structures and Unions: Introduction - Defining a Structure – Declaring Structure Variables – Accessing</p>	IB.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Rupy Stella Mary)

	Operations on Files - Error Handling during I/O Operations - Random Access to Files - Command Line Arguments.				
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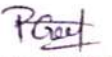
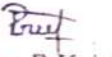
LESSON PLAN 2023-2024

Sub. Code : 23OUCS11

Semester: I

Title of the Paper : Programming in C

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jul'23	I	Unit – I: Overview of C: History of C – Importance of C – Sample Programs – Basic Structure of C Programs– Executing a 'C' Program. Constants, Variables and Data Types: Introduction – Character Set – C Tokens – Keywords and Identifiers – Constants – Variables – Data Types - Declaration of Variables – Declaration of Storage Class – Assigning Values to Variables - Defining Symbolic Constants – Declaring a Variable as Constant - Declaring a Variable as Volatile. Operators and Expressions: Introduction – Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators – Bitwise Operators – Special Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operators.	I B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	 (Mrs.P.Krishna Geetha)
	II	Unit-II: Managing Input and Output Operations: Introduction – Reading a Character – Writing a Character –	IB.Sc(CS) 'B'	12 Hrs	Chalk and Talk	 (Mrs.P.Krishna Geetha)

Aug'23		Formatted Input – Formatted Output. Decision Making and Branching: Introduction – Decision Making with If Statement – Simple If Statement – The If... Else statement – Nesting of If Else Statements – The Else If Ladder – The Switch Statement – The ?: Operator – The Goto Statement. Decision Making and Looping: Introduction - The while Statement – The do Statement – The for Statement – Jumps in Loops.				
Sep'23	III	Unit-III: Introduction – One-Dimensional Arrays – Declaration of One-Dimensional Arrays – Initialization of One-Dimensional Arrays – Two-Dimensional Arrays – Initializing Two-Dimensional Arrays – Multi-Dimensional Arrays – Dynamic Arrays. Character Arrays and Strings: Introduction – Declaring and Initializing String Variables – Reading Strings from Terminal - Writing Strings to Screen – Arithmetic Operations on Characters – Putting Strings Together – Comparison of Two Strings – String-Handling Functions.	IB.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>Preet</i> (Mrs.P.Krishna Geetha)
Oct'23	IV	Unit-IV: User-Defined Functions: Introduction – Need for User-Defined Functions – A Multi-Function Program – Elements of User-Defined Functions – Definition of Functions – Return Values and Their Types – Function Calls – Function Declaration – Category of Functions – No	IB.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>Preet</i> (Mrs P.Krishna Geetha)

		<p>Arguments and No Return Values – Arguments and but No Return Values – Arguments with Return Values – No Arguments and but Returns a Value – Nesting of Functions – Recursion – Passing Arrays to Functions – Searching and Sorting—Passing Strings to Functions- The Scope, Visibility and Lifetime of Variables. Structures and Unions: Introduction - Defining a Structure – Declaring Structure Variables – Accessing Structure Members – Structure Initialization – Copying and Comparing Structure Variables – Operations on Individual Members – Arrays of Structures – Arrays within Structures – Structures within Structures – Structures and Functions – Unions.</p>				
Oct'23	V	<p>Unit-v: Pointers: Introduction – Understanding Pointers - Accessing the Address of a Variable – Declaring Pointer Variables - Initialization of Pointer Variables – Accessing a Variable through its Pointer – Chain of Pointers – Pointer Expressions – Pointer Increments and Scale Factor – Pointers and Arrays – Pointers and Character Strings – Array of Pointers – Function that Return Multiple Values-Pointers as Function Arguments – Functions Returning Pointers – Pointers to Functions – Pointers and Structures. File Management</p>	IB.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<p><i>Preet</i> (Mrs.P.Krishna Geetha)</p>

	in C: Introduction – Defining and Opening a File - Closing a File – Input/Output Operations on Files – Error Handling during I/O Operations – Random Access to Files – Command Line Arguments.				
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S. Palanivel

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LESSON PLAN


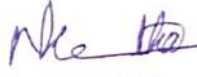
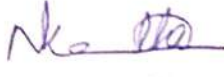
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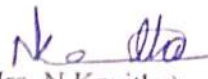
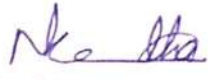
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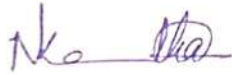
Class: I Year

Title of the Paper : Fundamentals of Information Technology

Total Hours : 30

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June 23	I	Introduction to Computers: Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Generations of Computer, Classification Of Computers, Applications of Computer, Capabilities and limitations of Computer.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)
July 23	II	Basic Computer Organization: Role of I/O devices in a computer system. Input Units: Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, Output Units: Monitors and its types. Printers: Impact Printers and its types. Non-Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.	5Hrs	Chalk & Talk	 (Mrs N.Kavitha)
August 23	III	Storage Fundamentals: Primary Vs Secondary Storage, Data storage & retrieval methods. Primary Storage: RAM ROM, PROM, EPROM, EEPROM. Secondary Storage: Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)

September 23	IV	Software: Software and its needs, Types of S/W. System Software: Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages. Application S/W and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)
October 2023	V	Operating System: Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multiprogramming, Multi-Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)



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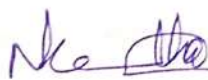
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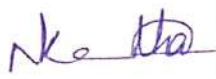


Sub. Code : 23OUCSFC1

Class: I B.Sc.,CS 'A'

Title of the Paper : Problem Solving Techniques

Total Hours : 30

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June 2023	I	Introduction: History, characteristics and limitations of Computer. Hardware/Anatomy of Computer: CPU, Memory, Secondary storage devices, Input Devices and Output devices. Types of Computers: PC, Workstation, Minicomputer, Main frame and Supercomputer. Software: System software and Application software. Programming Languages: Machine language, Assembly language, High-level language, 4 GL and 5GL Features of good programming language. Translators: Interpreters and Compilers.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)
July 2023	II	Data types, Input, Processing of data, Arithmetic Operators, Hierarchy of operations and Output. Different phases in Program Development Cycle (PDC). Structured Programming: Algorithm: Features of good algorithm, Benefits and drawbacks of algorithm. Flowcharts: Advantages and limitations of flowcharts, when to use flowcharts, flowchart symbols and types of flowcharts. Pseudocode: Writing a pseudocode.	5Hrs	Chalk & Talk	 (Mrs N.Kavitha)

		Coding, documenting and testing a program: Comment lines and types of errors. Program design: Modular Programming.			
August 2023	III	Selection Structures: Relational and Logical Operators - Selecting from Several Alternatives - Applications of Selection Structures. Repetition Structures: Counter Controlled Loops -Nested Loops- Applications of Repetition Structures.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)
September 2023	IV	Numeric Data and Character Based Data. Arrays: One Dimensional Array - Two Dimensional Arrays - Strings as Arrays of Characters.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)
October 2023	V	Data Flow Diagrams: Definition, DFD symbols and types of DFDs. Program Modules: Subprograms- Value and Reference parameters- Scope of a variable - Functions Recursion. Files: File Basics-Creating and reading a sequential file- Modifying Sequential Files.	5Hrs	Chalk & Talk	 (Mrs. N.Kavitha)



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Class : I B.Sc., Computer Science

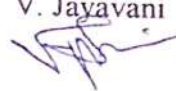
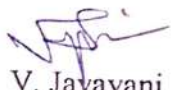
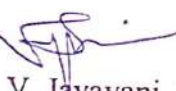
Semester : I


Sub. Code : 23OUCSFC1

Title of the Paper : Problem Solving Techniques

Total Hours : 30 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jul ' 23	I	Introduction: History, characteristics and limitations of Computer. Hardware/Anatomy of Computer: CPU, Memory, Secondary storage devices, Input Devices and Output devices. Types of Computers: PC, Workstation, Minicomputer, Main frame and Supercomputer. Software: System software and Application software. Programming Languages: Machine language, Assembly language, High- level language, 4 GL and 5GL-Features of good programming language. Translators: Interpreters and Compilers.	I B.Sc(CS) 'B'	5 Hrs	Chalk and Talk	V. Jayavani 
Aug' 23	II	Data: Data types, Input, Processing of data, Arithmetic Operators, Hierarchy of operations and Output. Different phases in Program Development Cycle (PDC). Structured programming: Algorithm: Features of good algorithm, Benefits and drawbacks of algorithm. Flowcharts: Advantages and limitations of flowcharts, when to use flowcharts, flowchart symbols and types of flowcharts. Pseudocode: Writing a pseudocode. Coding, documenting and testing a program: Comment lines and types of errors. Program design: Modular Programming.	I B.Sc(CS) 'B'	5 Hrs	Chalk and Talk	V. Jayavani 

Sep '23	III	Selection Structures: Relational and Logical Operators - Selecting from Several Alternatives – Applications of Selection Structures. Repetition Structures: Counter Controlled Loops –Nested Loops– Applications of Repetition Structures.	I B.Sc(CS) 'B'	5 Hrs	Chalk and Talk	V. Jayavani 
Oct' 23	IV	Data: Numeric Data and Character Based Data. Arrays: One Dimensional Array - Two Dimensional Arrays – Strings as Arrays of Characters.	I B.Sc(CS) 'B'	5 Hrs	Chalk and Talk	V. Jayavani 
Oct' 23	V	Data Flow Diagrams: Definition, DFD symbols and types of DFDs. Program Modules: Subprograms- Value and Reference parameters- Scope of a variable - Functions – Recursion. Files: File Basics-Creating and reading a sequential file- Modifying Sequential Files.	I B.Sc(CS) 'B'	5 Hrs	Chalk and Talk	V. Jayavani 


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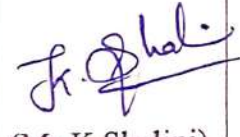
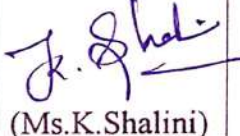

LESSON PLAN
2023-2024



Sub. Code : 22OUCS31

Semester: III

Title of the Paper : Digital Principles and Computer Organization

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun 23	I	Digital Logic: The Basic Gates - NOT, OR, AND – Universal Gates-NOR, NAND. Combinational logic Circuits: Boolean Laws and Theorem – Sum-of-Product Method – Truth Table to Karnaugh Map – Pairs, Quads and Octets – Karnaugh Simplifications – Don't care Conditions. Data Processing Circuits: Multiplexers – Demultiplexer – 1-of-16 Decoder – Encoders.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
July 23	II	Number Systems and Codes: Binary Number System – Binary-to-decimal Conversion – Decimal-to-binary Conversion – Octal Numbers – Hexadecimal Numbers- The ASCII Code – The Excess-3 Code – The Gray Code. Arithmetic Circuits: Binary Addition – Binary Subtraction – 2's Complement Representation – 2's Complement Arithmetic. Flip-Flops: RS FLIP-FLOPs – Edge-triggered D FLIP-FLOPs – Edge-triggered JK FLIP-FLOPs – JK Master Slave FLIP-FLOPs. Counters: Asynchronous Counters – Synchronous Counters.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Aug 23	III	Basic Computer Organization and Design: Instruction Codes – Computer Registers – Computer Instructions – Instruction Cycle – Input-Output Interrupt. Programming the Basic Computer: Assembly	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)

		Language – The Assembler – Subroutines				
Sep	IV	Central Processing Unit: Introduction – General Register Organization – Stack Organization – Instruction Formats – Addressing Modes – Data Transfer and Manipulation – Reduced Instruction Set Computer(RISC). Pipeline and Vector Processing: Parallel Processing – Pipelining – Instruction Pipelining.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Oct	V	Input-Output Organization: Peripheral Device – Input-Output Interface – Direct Memory Access (DMA) – Memory Organization: Memory Hierarchy - Main Memory – Auxiliary Memory – Associative Memory – Cache Memory – Virtual Memory.	II B.Sc(CS) 'A' And 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)


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Class : II B.Sc., Computer Science

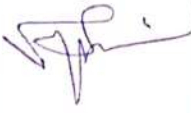
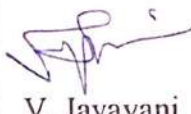

Semester : III


Sub. Code : 22OUCS32

Title of the Paper : RDBMS

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun ' 23	I	Introduction to Database Management System (DBMS): Introduction – Characteristics of Data in Database – Database Management System – Why DBMS – Types of Database Management Systems. Introduction to Relational Database Management System (RDBMS): Introduction – RDBMS Terminology – The Relational Data Structure – Relational Data Integrity – Relational Data Manipulation. Database Architecture and Data Modeling: Introduction – Conceptual, Physical and Logical Database Models – Database Design – Design Constraints – Functional Dependencies.	II B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 V. Jayavani
Jul' 23	II	Entity-Relationship model (E-R) Modeling: Introduction – E-R Model, Components of an E-R Model – E-R Modeling Symbols. Data Normalization: Introduction – First Normal Form(1NF) – Second Normal Form(2NF) – Third Normal Form(3NF) – Boyce-Codd Normal Form(BCNF) – Forth Normal Form(4NF) – Fifth Normal Form(5NF) – Domain-key Normal Form(DKNF) – Denormalization. Relational Algebra and Relational Calculus: Relational Algebra – Relational Calculus.	II B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 V. Jayavani
Aug '23	III	Introduction to Structured Query Language (SQL): Introduction – Characteristics of SQL – Advantages of				

		SQL – SQL Data Types and Literals – Types of SQL commands – SQL Operators – Arithmetic Operators – Comparison Operators – Logical Operators – Set Operators. Tables, Views and Indexes: Tables – Views – Indexes – Queries and Subqueries: Queries – Subqueries – Aggregate Functions: Introduction–General Rules – COUNT () and COUNT (*) – SUM () – AVG () – MAX () and MIN ().	II B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	V. Jayavani 
Sep' 23	IV	Insert, Update and Delete Operations: Introduction – INSERT statement – Bulk insert of Data – UPDATE Statement – Delete Statement – Cursor: Introduction – Cursor Operations – Cursor Positions – Joins and Unions: Joins – Unions – Triggers: Introduction – What is Trigger? – Types of Triggers – Trigger Syntax – Combining Trigger Types – Setting Inserted Values – Disabling and Enabling Triggers – Advantages and Limitations of Triggers.	II B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	V. Jayavani 
Oct' 23	V	Database Security: Introduction – Database Environment – Data Security Risks – Dimensions of Database security – Data Security Requirements – Protecting the Data within the Database – Granting and Revoking Privileges and Roles – Data Integrity: Introduction – Types of Integrity Constrains – Transaction Management and Concurrency Control: Introduction – Transactions, Transaction Properties – Transaction States – Concurrency Control – Serializability, Recoverability – Concurrency Control Schemes – The COMMIT Command – The ROLLBACK Command – The SAVEPOINT Command.	II B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	V. Jayavani 


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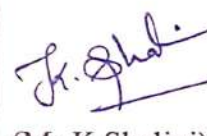
Sub. Code : 22OUCS32

Semester: III

Title of the Paper : RDBMS

Total Hours : 60

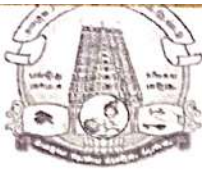
Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun 23	I	Introduction to Database Management System (DBMS): Introduction – Characteristics of Data in Database – Database Management System – Why DBMS – Types of Database Management Systems. Introduction to Relational Database Management System (RDBMS): Introduction – RDBMS Terminology – The Relational Data Structure – Relational Data Integrity – Relational Data Manipulation. Database Architecture and Data Modeling: Introduction – Conceptual, Physical and Logical Database Models – Database Design – Design Constrains – Functional Dependencies.	II B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>J. Shalini</i> (Ms.K.Shalini)
July 23	II	. Entity-Relationship model (E-R) Modeling: Introduction – E-R Model, Components of an E-R Model – E-R Modeling Symbols. Data Normalization: Introduction – First Normal Form(1NF) – Second Normal Form(2NF) – Third Normal Form(3NF) – Boyce-Codd Normal Form(BCNF) – Forth Normal Form(4NF) – Fifth Normal Form(5NF) – Domain-key Normal Form(DKNF) – Denormalization. Relational Algebra and Relational Calculus: Relational Algebra – Relational Calculus.	II B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>J. Shalini</i> (Ms.K.Shalini)
Aug 23	III	Introduction to Structured Query Language (SQL): Introduction – Characteristics of SQL – Advantages of SQL – SQL Data Types and Literals – Types of SQL commands – SQL Operators – Arithmetic Operators	II B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>J. Shalini</i> (Ms.K.Shalini)

		<p>– Comparison Operators – Logical Operators – Set Operators. Tables, Views and Indexes: Tables – Views – Indexes – Queries and Subqueries: Queries – Subqueries – Aggregate Functions: Introduction–General Rules – COUNT () and COUNT (*) – SUM () – AVG () – MAX () and MIN ().</p>				
Sep 23	IV	<p>Insert, Update and Delete Operations: Introduction – INSERT statement – Bulk insert of Data – UPDATE Statement – Delete Statement – Cursor: Introduction – Cursor Operations – Cursor Positions – Joins and Unions: Joins – Unions – Triggers: Introduction – What is Trigger? – Types of Triggers – Trigger Syntax – Combining Trigger Types – Setting Inserted Values – Disabling and Enabling Triggers – Advantages and Limitations of Triggers.</p>	II B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)
Oct 23	V	<p>Database Security: Introduction – Database Environment – Data Security Risks – Dimensions of Database security – Data Security Requirements – Protecting the Data within the Database – Granting and Revoking Privileges and Roles – Data Integrity: Introduction – Types of Integrity Constrains – Transaction Management and Concurrency Control: Introduction – Transactions, Transaction Properties – Transaction States – Concurrency Control – Serializability, Recoverability – Concurrency Control Schemes – The COMMIT Command – The ROLLBACK Command – The SAVEPOINT Command.</p>	II B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	 (Ms.K.Shalini)



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LESSON PLAN 2023-2024


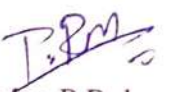
Sub. Code : 21S51

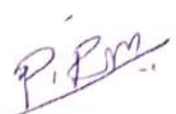
Semester: V

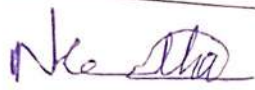
Title of the Paper : Operating Systems

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun23	I	Unit – I: Introduction: What Operating Systems Do- Computer System Organization-Computer System Architecture- Operating System Structure- Operating System Operations-Process Management- Memory Management - Open Source Operating Systems. System Structures: Operating System Services- User and Operating System Interface- System Calls-Types of System Calls-System Programs-Operating – System Debugging.	III B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Ruby Stella Mary)
Jul23	II	Unit-II:Process Management: Process Concept-Process scheduling -Operation on process- Interprocess communication- Examples of IPC Systems- Communication in Client Server Systems.	III B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Ruby Stella Mary)

		Multithreaded Programming: Overview- Multithreading Models- Thread Libraries-Implicit Threading-Threading Issues.				
Aug23	III	Unit-III: Process Scheduling: Basic concepts- Scheduling criteria-Scheduling algorithms. Thread Scheduling - Multiple Processor Scheduling. Synchronization: Background - The Critical Section Problem-Peterson's Solution-Synchronization Hardware - Semaphores- Deadlocks: Deadlock Characterization-Methods for Handling Deadlock Deadlock Prevention- Deadlock Avoidance- Deadlock Detection- Recovery from Deadlock.	III B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P. Ruby Stella Mary)
Sep23	IV	Unit-IV: Memory Management Strategies: Background- swapping-Contiguous Memory allocation- Segmentation-Paging- Structure of the Page Table. Virtual memory Management: Background- Demand Paging-Copy on Write-Page Replacement Allocation of Frames- Thrashing	III B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P. Ruby Stella Mary)

Oct23	V File System: File concepts-Access methods-Implementing File System: File System Structure- Allocation Methods-Free Space Management. Mass-Storage Structure: Overview of Mass Storage Structure-Disk structure- Disk Scheduling-Disk Management	III B.Sc(CS) 'A'	12 Hrs	Chalk and Talk	 (Mrs. P.Ruby Stella Mary)
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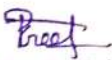
LESSON PLAN
2023-2024

Sub. Code : 21S51

Semester: V

Title of the Paper : Operating Systems

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun23	I	Unit – I: Introduction: What Operating Systems Do- Computer System Organization-Computer System Architecture- Operating System Structure- Operating System Operations-Process Management- Memory Management - Open Source Operating Systems. System Structures: Operating System Services- User and Operating System Interface- System Calls-Types of System Calls-System Programs-Operating – System Debugging.	III B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	 (Mrs.P.Krishna geetha)
Jul23	II	Unit-II:Process Management: Process Concept-Process scheduling -Operation on process- Interprocess communication- Examples of IPC Systems- Communication in Client Server Systems.	III B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	 (Mrs.P.Krishna geetha)

		Multithreaded Programming: Overview-Multithreading Models-Thread Libraries-Implicit Threading-Threading Issues.				
Aug23	III	Unit-III: Process Scheduling: Basic concepts- Scheduling criteria-Scheduling algorithms. Thread Scheduling - Multiple Processor Scheduling. Synchronization: Background - The Critical Section Problem-Peterson's Solution-Synchronization Hardware - Semaphores-Deadlocks: Deadlock Characterization-Methods for Handling Deadlock Deadlock Prevention-Deadlock Avoidance-Deadlock Detection-Recovery from Deadlock.	III B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>Preet</i> (Mrs.P.Krishna geetha)
Sep23	IV	Unit-IV: Memory Management Strategies: Background-swapping-Contiguous Memory allocation-Segmentation-Paging-Structure of the Page Table. Virtual memory Management: Background-Demand Paging-Copy on Write-Page Replacement Allocation of Frames-Thrashing	III B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<i>Preet</i> (Mrs.P.Krishna geetha)

Oct23	<p>Unit-v:</p> <p>File System: File concepts-Access methods-Implementing File System: File System Structure- Allocation Methods-Free Space Management. Mass-Storage Structure: Overview of Mass Storage Structure-Disk structure- Disk Scheduling-Disk Management</p>	III B.Sc(CS) 'B'	12 Hrs	Chalk and Talk	<p><i>Preet</i> (Miss.P.Krishna geetha)</p>
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LESSON PLAN
2023-2024



Class : III B.Sc., Computer Science




Semester : V

Sub. Code : 21S52

Title of the Paper: Software Engineering

Total Hours : 75 Hours

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
Jun ' 23	I	Software and Software Engineering: The Nature of Software – Software Engineering – The Software Process. Process Models: A Generic Process Model – Process Assessment and Improvement – Prescriptive Process Models – Specialized Process Models – The Unified Process – Personal and Team Process Models. Agile Development: What is Agility? – Agility and the Cost of Change – What is an Agile Process?	III B.Sc(CS) 'A' & 'B'	15 Hrs	Chalk & Talk	V. Jayavani 
Jul' 23	II	Understanding Requirements: Requirements Engineering– Establishing the Groundwork – Eliciting Requirements – Building Requirements Model. Requirements Modeling: Scenarios, Information, and Analysis Classes: Requirement Analysis – Scenario-Based Modeling – UML Models That Supplement The Use Case – Data Modeling Concepts – Class-Based Modeling.	III B.Sc(CS) 'A' & 'B'	15 Hrs	Chalk & Talk	V. Jayavani 

Aug '23	III	Design Concepts: Design Concepts – The Design Model. Architectural Design: Software Architecture – Architectural Design. Component-Level Design: What Is a Component? – Designing Class-Based Components. User Interface Design: User Interface Analysis and Design – Interface Design Steps.	III B.Sc(CS) 'A' & 'B'	15 Hrs	Chalk & Talk	V. Jayavani 
Sep' 23	IV	Software Quality Assurance: Elements of Software Quality Assurance – Software Reliability. Software Testing Strategies: A Strategies Approach to Software Testing – Test Strategies for Conventional Software – Validation Testing – System Testing – The Art of Debugging. Test Conventional Applications: Software Testing Fundamentals – White-Box Testing – Basis Path Testing – Control Structure Testing – Black-Box Testing.	III B.Sc(CS) 'A' & 'B'	15 Hrs	Chalk & Talk	V. Jayavani 
Oct' 23	V	Software Configuration Management: Software Configuration Management – The SCM Repository – The SCM Process. Project Scheduling: Project Scheduling – Scheduling. Risk Management: Risk Identification – Risk Projection – Risk Refinement. Maintenance And Reengineering: Software Maintenance – Business Process Reengineering – Software Reengineering – Restructuring.	III B.Sc(CS) 'A' & 'B'	15 Hrs	Chalk & Talk	V. Jayavani 



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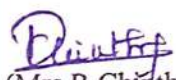

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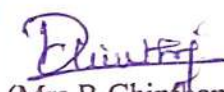

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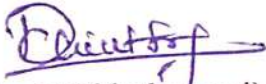
Class: III B.Sc(CS) 'A'


Title of the Paper : Programming in Python

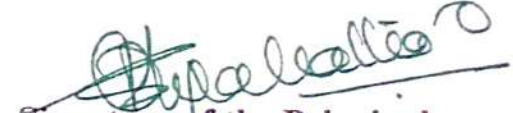
Total Hours : 60

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June 23	I	Introduction to Python: Python– Features of Python– Execution of Python Program– Viewing the Byte Code – Comparisons between Java and Python. Writing Our First Python Program: Installing Python for Windows – Verifying the Path to Python – Writing Our First Python Program – Executing a Python Program. Datatypes in Python: Comments in Python– Docstrings – How Python sees Variables – Datatypes in Python – Built- in datatypes – bool Datatype– Sequences in Python – Sets– Literals in Python– Determining the Datatype of a variable – What about Characters User- defined Datatypes – Constants in Python – Identifiers and Reserved words – Naming Conventions in Python.	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)
July 23	II	Operators in Python: Operator– Arithmetic Operators– Using Python Interpreter as Calculator– Assignment Operators – Unary Minus Operator – Relational Operators– Logical Operators– Boolean Operators– Bitwise Operators – Membership Operators– Identity Operators – Mathematical Functions. Input and Output:	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)

		<p>Output statements- Input Statements - Command Line Arguments. Control Statements: Control Statements - The if Statement - The if...else Statement - The if...elif...else Statement- The while statement - The for Loop- Infinite Loops- Nested Loops - The else Suite- The break Statement - The continue Statement- The pass Statement - The assert Statement- The return Statement.</p>			
August 23	III	<p>Arrays in Python: Arrays - Advantages of Arrays - Creating an Array - Importing the Array Module - Indexing and Slicing on Arrays - Types of Arrays- Aliasing the Arrays. Strings and Characters: Creating Strings - Length of a String - Indexing in Strings - Slicing the Strings - Repeating the Strings - Concatenation of Strings - Checking Membership - Comparing Strings - Removing Spaces from a String - Finding Sub Strings - Counting Substrings in a String - Strings are Immutable Replacing a String with another String - Splitting and Joining Strings - Checking Starting and Ending of a String - Sorting Strings.</p>	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)
September 23	IV	<p>Functions: Difference between a Function and a Method - Defining a Function - Calling a Function - Returning Results from a Function - Returning Multiple Values from a Function -Pass by Object Reference - The Global Keyword-Passing a Group of Elements to a Function - Recursive Function- Anonymous</p>	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)

		<p>Functions or Lambdas — Function Decorators — Generators –Creating our Own Modules in Python. Lists and Tuples: List — Creating Lists using range () Function — Updating the Elements of a List — Concatenation of Two Lists – Repetition of Lists — Membership in Lists — Aliasing and Cloning Lists — Tuples – Creating Tuples — Accessing the Tuple Elements – Basic Operations on Tuples – Function to Process Tuples– Nested Tuples – Inserting Elements in a Tuple – Modifying Elements of a Tuple — Deleting Elements from a Tuple.</p>			
October 2023	V	<p>Dictionaries: Operations on Dictionaries — Dictionary Methods — Using for Loop with Dictionaries — Sorting the Elements of a Dictionary using Lambdas– Converting Lists into Dictionary — Converting Strings into Dictionary — Passing Dictionaries to Functions — Ordered Dictionaries. Exceptions: Errors in a Python Program — Exceptions — Exception Handling — Types of Exceptions — The Except Block — The assert Block– User-Defined Exceptions — Logging the Exceptions. Files in Python: Files– Types of Files in Python — Opening a File — Closing a File — Working with Text Files containing Strings — The seek() and tell() Methods — Working with Directories.</p>	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)


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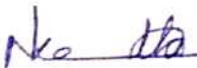


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LESSON PLAN
2023-2024

Sub. Code : 21S53
Title of the Paper : Programming in Python
Total Hours : 60

Class: III B.Sc(CS) 'B'

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June 23	I	Introduction to Python: Python- Features of Python- Execution of Python Program- Viewing the Byte Code - Comparisons between Java and Python. Writing Our First Python Program: Installing Python for Windows - Verifying the Path to Python - Writing Our First Python Program - Executing a Python Program. Datatypes in Python: Comments in Python- Docstrings - How Python sees Variables - Datatypes in Python - Built- in datatypes - bool Datatype- Sequences in Python - Sets- Literals in Python- Determining the Datatype of a variable - What about Characters User- defined Datatypes - Constants in Python - Identifiers and Reserved words - Naming Conventions in Python.	12Hrs	Chalk & Talk	 (Mrs.N.Kavitha)
July 23	II	Operators in Python: Operator- Arithmetic Operators- Using Python Interpreter as Calculator- Assignment Operators - Unary Minus Operator - Relational Operators- Logical Operators- Boolean Operators- Bitwise Operators - Membership	12Hrs	Chalk & Talk	 (Mrs. N.Kavitha)

		<p>Operators- Identity Operators - Mathematical Functions. Input and Output: Output statements- Input Statements- Command Line Arguments. Control Statements: Control Statements - The if Statement - The if...else Statement - The if...elif...else Statement- The while statement - The for Loop- Infinite Loops- Nested Loops - The else Suite- The break Statement - The continue Statement- The pass Statement - The assert Statement- The return Statement.</p>			
August 23	III	<p>Arrays in Python: Arrays - Advantages of Arrays - Creating an Array - Importing the Array Module - Indexing and Slicing on Arrays - Types of Arrays- Aliasing the Arrays. Strings and Characters: Creating Strings - Length of a String - Indexing in Strings - Slicing the Strings - Repeating the Strings - Concatenation of Strings - Checking Membership - Comparing Strings - Removing Spaces from a String - Finding Sub Strings - Counting Substrings in a String - Strings are Immutable Replacing a String with another String - Splitting and Joining Strings - Checking Starting and Ending of a String - Sorting Strings.</p>	12Hrs	Chalk & Talk	<p><i>Nke</i> (Mrs. N.Kavitha)</p>
September 23	IV	<p>Functions: Difference between a Function and a Method - Defining a Function - Calling a Function - Returning Results from a Function - Returning Multiple Values from a Function -Pass by</p>	12Hrs	Chalk & Talk	<p><i>Nke</i> (Mrs. N.Kavitha)</p>

		<p>Object Reference – The Global Keyword–Passing a Group of Elements to a Function – Recursive Function– Anonymous Functions or Lambdas – Function Decorators – Generators –Creating our Own Modules in Python. Lists and Tuples: List – Creating Lists using range () Function – Updating the Elements of a List – Concatenation of Two Lists – Repetition of Lists – Membership in Lists – Aliasing and Cloning Lists – Tuples – Creating Tuples – Accessing the Tuple Elements – Basic Operations on Tuples – Function to Process Tuples– Nested Tuples – Inserting Elements in a Tuple – Modifying Elements of a Tuple – Deleting Elements from a Tuple.</p>			
October 2023	V	<p>Dictionaries: Operations on Dictionaries – Dictionary Methods – Using for Loop with Dictionaries – Sorting the Elements of a Dictionary using Lambdas– Converting Lists into Dictionary – Converting Strings into Dictionary – Passing Dictionaries to Functions – Ordered Dictionaries. Exceptions: Errors in a Python Program – Exceptions – Exception Handling – Types of Exceptions – The Except Block – The assert Block– User-Defined Exceptions – Logging the Exceptions. Files in Python: Files– Types of Files in Python – Opening</p>	12Hrs	Chalk & Talk	<p><i>Nke</i> (Mrs. N.Kavitha)</p>



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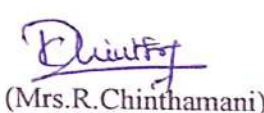

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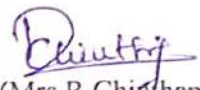
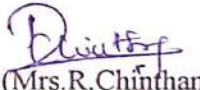
Sub. Code : 2ISE5A

Class: III B.Sc(CS) 'B'

Title of the Paper : Computer Graphics

Total Hours : 60

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June 2023	I	A Survey of Computer Graphics: Computer-Aided Design – Presentation Graphics – Computer Art-Entertainment- Education and Training – Visualization – Image Processing – Graphical User Interface. Overview of Graphics Systems: Video Display Devices- Raster-Scan Systems- Random-Scan Systems- Input Devices-Graphics software.	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)
July 2023	II	Output Primitives: Point and Lines. Line-Drawing Algorithms:-DDA Algorithm- Bresenham's Line algorithm – Circle-Generating Algorithm – Character Generation. Attributes of Output Primitives: Line Attributes – Curve Attributes – Area-Fill Attributes – Character Attributes – Bundled Attributes.	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)
August 2023	III	Two-Dimensional Geometric transformations: Basic Transformations - Matrix Representations – Composite Transformations. Two-Dimensional Viewing:	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)

		Two Dimensional Viewing Functions – Clipping Operations – Point Clipping - Line Clipping- Polygon Clipping – Curve Clipping – Text Clipping – Exterior Clipping.			
September 2023	IV	Graphical User Interfaces and Interactive Input Methods: Input of Graphical Data– Three-Dimensional Concepts: Three- Dimensional Display Methods – Three-Dimensional Graphics Packages. Three-Dimensional Object Representations: Polygon Surfaces – Curved Lines and Surfaces – Quadric Surfaces – Super quadrics.	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)
October 2023	V	Color Models: Properties of Light – RGB Color Model – YIQ Color Models – CMY Color Model – HSB Color Model – Color Selection and Applications. Computer Animation: Design of Animation Sequences – General Computer Animation – Raster animations – Computer Animation languages – Key-Frame System.	12Hrs	Chalk & Talk	 (Mrs.R.Chinthamani)



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LESSON PLAN



2023-2024

Sub. Code : 21SE5A

Class: III B.Sc(CS) 'B'

Title of the Paper : Computer Graphics

Total Hours : 60

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June 2023	I	A Survey of Computer Graphics: Computer-Aided Design – Presentation Graphics – Computer Art-Entertainment- Education and Training – Visualization – Image Processing – Graphical User Interface. Overview of Graphics Systems: Video Display Devices-Raster-Scan Systems-Random-Scan Systems-Input Devices-Graphics software.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)
July 2023	II	Output Primitives: Point and Lines. Line-Drawing Algorithms:-DDA Algorithm- Bresenham's Line algorithm – Circle-Generating Algorithm – Character Generation. Attributes of Output Primitives: Line Attributes – Curve Attributes – Area-Fill Attributes – Character Attributes – Bundled Attributes.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)



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LESSON PLAN 2023-2024

Sub. Code : 21SE5A

Class: III B.Sc.,CS 'B' Sec

Title of the Paper : Computer Graphics

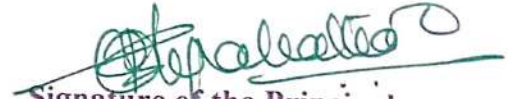
Total Hours : 60

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
August 2023	III	Two-Dimensional Geometric transformations: Basic Transformations - Matrix Representations - Composite Transformations. Two-Dimensional Viewing: Two Dimensional Viewing Functions - Clipping Operations - Point Clipping - Line Clipping- Polygon Clipping - Curve Clipping - Text Clipping - Exterior Clipping.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)
September 2023	IV	Graphical User Interfaces and Interactive Input Methods: Input of Graphical Data-Three-Dimensional Concepts: Three-Dimensional Display Methods - Three-Dimensional Graphics Packages. Three-Dimensional Object Representations: Polygon Surfaces - Curved Lines and Surfaces - Quadric Surfaces - Super quadrics.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)
October 2023	V	Color Models: Properties of Light - RGB Color Model - YIQ Color Models - CMY Color Model - HSB Color Model - Color Selection and Applications. Computer Animation: Design of Animation Sequences -	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)

		General Computer Animation – Raster animations – Computer Animation languages – Key- Frame System.			
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LESSON PLAN 2023-2024


Sub. Code : 21S61

Class: III B.Sc.,CS 'A' Sec

Title of the Paper : Data Communication and Networking

Total Hours : 60

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
December 2023	I	Introduction – Data Communications – Networks – The Internet – Protocols and Standards. Network Models: The OSI Model –Layers in the OSI Model– TCP/IP Protocol Suite –Addressing.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)
January 2024	II	Transmission media – Guided Media – Unguided Media: Wireless .Switching: Circuit -Switched Network – Datagram Networks – Virtual Circuit Networks – Structure of a Switch.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)
February 2024	III	Error Detection and Correction: Introduction – Block Coding – Linear Block Codes – Cyclic Codes. Data Link Control: Framing – Flow and Error Control. Network Layer: Logical Addressing: IPv4 Addresses – IPv6 Addresses.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)
February 2024	IV	Network Layer: Delivery, Forwarding and Routing: Delivery – Forwarding Unicast Routing Protocols- Multicast Routing Protocols. Process-to-Process Delivery: UDP, TCP and SCTP: Process-to-Process	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)

		Delivery - User Datagram Protocol (UDP) TCP - SCTP. Domain Name System: DNS in the Internet.			
March 2024	V	Network Security: Security Services - Message Confidentiality - Message Integrity - Message Authentication - Digital Signature - Entity Authentication - Security in the Internet : IPSec, SSL/TGS,PGP,VPN and Firewalls. IPSecurity(IPSec) -Firewalls.	12Hrs	Chalk & Talk	 (Mrs.R.Keerthana)



Signature of the HOD



Signature of the Principal
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