

Lesson Plan

Fundamentals of Computer and Programming in C (Semester-I (DSC)

Paper Code: C24COS101T

Class: B.Sc./ B.A. (C.Sc.) 1st Sem.

Name of Month	Weekly Description	Contents
August	Week1	Basics of Computers: Definition of a Computer - Characteristics and Applications of Computers – Block Diagram of a Digital Computer
	Week2	Classification of Computers based on size and working – Central Processing Unit – I/O Devices
	Week3	Storage: Primary, Auxiliary and Cache Memory – Memory Devices Software, Hardware, Firmware
	Week4	Operating System – Definition and Functions of an Operating System – MS-DOS MS Windows – Desktop, Computer, Documents, Pictures, Music, Videos, Recycle Bin, Task Bar – Control Pane Doubt Session of Unit I
September	Week5	Programming Fundamentals: Keywords, Variables and Constants, Structure of a C Program Input/Output. Operators & Expressions: Arithmetic, Unary, Logical. Bit-wise, Assignmen
	Week6	Conditional Operators Decision Making: Decision making using if...else. Else If Ladder, Switch, break. Continue and Goto statements
	Week7	Loop Control Structure: While and do-while, for loop and Nested for loop, Decision using switch; goto, break and continue statements
	Week8	Functions: Introduction, using functions – Function declaration/ prototype – Function definition function call, return statement – Passing parameters, Recursive functions Arrays
October	Week9	Introduction, Declaration of Arrays, Accessing elements of the Array, Storing Values in Array, Passing array element to a function: Call by Value and Call by Reference Test
	Week10	One dimensional array -declaration, initialization, Accessing one dimensional array, Two dimensional Arrays-declaration,
	Week11	Array initialization, Accessing two dimensional arrays. Assignment and Doubt Session
	Week12	Strings: Introduction, String and Character functions, String Operations using String functions- strcat() , strcmp() , strcpy() , strlen().
November	Week13	Pointers: Declaring Pointer Variable, Pointer Expressions and Pointer Arithmetic, Passing Arguments to Functions using Pointers
	Week14	Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions Structures
	Week15	Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers
	Week16	Revision

Lesson Plan

Data Base Management System (Semester III) (DSC)

Paper Code: C24COS301T

Class: B.Sc./ B.A. (C.Sc.) 3rd Sem.

Name of Month	Weekly Description	Contents
July	Week1	Basic Introduction: Data, Information, Records, Files and Database. Characteristics of Database Management System
	Week2	. Advantages and Disadvantages of DBMS. Database Users and various types of DBMS users.
	Week3	IDatabase Administrator (DBA) and responsibilities of DBA. Schema and Instance.
	Week4	Views of Database. Physical and Logical Data Independence Database Languages , . DBMS over File Processing System
August	Week5	DBMS Architecture: Three Schema Database Architecture, Doubt Session
	Week6	Models: Hierarchical, Network and Relational Data Models
	Week7	Data. Entity-Relationship Model: Entity, Entity Sets, and Entity Type, Attributes: Type of Attributes, Relationships-Relationship set
	Week8	Degree of Relationship, Cardinality Ratio. Participation Constraints. ER Diagram:
September	Week9	Symbolic Notations for Designing ER Diagram and Doubt Session
	Week10	Relational Model: Relational model concepts (Domain, Attribute, Tuple, Relations, Characteristics of a relation)
	Week11	Keys: Super Key, Candidate Key, Primary Key, Foreign Key. Constraints- Key constraints, Domain constraints,
	Week12	Referential integrity constraints; Relational algebra : Basic operations like Select, Project,
October	Week13	Union, Intersection, Difference, Projection, Selection, Join
	Week14	Assignment and Doubt Session
	Week15	Database design: functional dependencies, Normal forms (1 NF, 2 NF,
	Week16	Relational 3 NF and BCNF). Decomposition, types of decomposition, properties of decomposition
November	Week 17	Revision and Test
	Week 18	Introduction, Data Types; DDL-Create, Alter and Drop table Commands. DML- SELECT/ FROM/WHERE
	Week 19	Introduction, Data Types; DDL-Create, Alter and Drop table Commands. DML- SELECT/ FROM/WHERE
	Week 20	Doubt Session

Lesson Plan

Operating System (Semester-V) (DSC)

Paper Code: C24COS501T

Class: B.Sc./ B.A. (C.Sc.) 5th Sem.

Name of Month	Weekly Description	Contents
July	Week1	Operating System, Functions and Characteristics, Historical Evolution of Operating Systems, Types of Operating
	Week2	: Real-time, Multiprogramming, Multiprocessing, Batch processing. Operating System Services
	Week3	System, System Calls, System Programs, Operating System Structure. Process Management: Process Concepts
	Week4	Operations on Processes, Process States, and Process Control Block.
August	Week5	Inter- Process Communication, doubt session of unit 1
	Week6	: Scheduling Criteria, Levels of Scheduling, Scheduling Algorithms,
	Week7	CPU Scheduling Multiple Processor Scheduling, Algorithm Evaluation
	Week8	Process Synchronization: Critical Section Problem, Semaphores, Classical Problem of Synchronization, Monitors.
September	Week9	Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention,
	Week10	Deadlocks Deadlock Avoidance, Deadlock Detection and Recovery. Doubt session Unit II
	Week11	Memory Management Background, Logical versus Physical Address Space, Swapping
	Week12	Contiguous Memory Allocation, External and Internal Fragmentation,
October	Week13	Paging and Segmentation; Virtual Memory Management: Demand Paging
	Week14	Page Replacement Algorithms, Thrashing.
	Week15	Doubt Session, Test and Assignment
	Week16	File System Implementation: File, File Attributes, File Operations, Types of Files,
November	Week 17	File System Structure, File Access Methods, Directory Structures, File Allocation Methods
	Week 18	Free Space Management. Disk Scheduling algorithm- FCFS, SSTF, Scan
	Week 19	C-Scan, Look, C-Look. Disk Management
	Week 20	Doubt Session

Lesson Plan

SEC office Tools

Class: B.A./B.Com./B.Sc./ III Sem.

Name of Month	Weekly Description	Contents
July	Week 1	Introduction to Excel: About Excel, Uses of Excel
	Week 2	Spreadsheet window pane, Ribbon
	Week 3	Home Tab – Cut, Copy, Paste, Font
August	Week 4	Revision and Doubt Session
	Week5	insert cell, delete cell, format cell, fill, clear, find and replace
	Week 6	Alignment, data types, conditional formatting
	Week 7	Page Layout Tab- Theme group
September	Week 8	Page setup group, Formula Bar. Test and Assignment 1
	Week 9	Creating Formulas : Using Formulas
	Week10	Formula Functions – Sum, Average, if, Count Test
	Week 11	max, min, Proper, Upper, Lower, Using AutoSum
October	Week 12	Create and run a macro, Doubt Session
	Week 13	Spreadsheet Chart: Creating Charts
	Week 14	Different types of charts
	Week 15	Formatting Chart Objects, Changing the Chart Type
November	Week 16	Showing and Hiding the Legend, Showing and Hiding the Data Table, Test
	Week 17	Doubt session
	Week 18	Revision of Unit I
	Week 19	Revision of unit 2

Lesson Plan

SEC office Tools

Class: B.A./B.Com./B.Sc./ Ist Sem.

Name of Month	Weekly Description	Contents
August	Week 1	Operating System - Definition, Functions, Types of Operating System, Basics of Popular Operating Systems, The User Interface
	Week 2	Exploring Computer, Icons, taskbar, desktop, Using Menu and Menu-selection, managing files and folders
	Week 3	Control panel – display properties, add/remove software and hardware, Common utilities.
	Week 4	Basic Word Processing - Introduction to Word Processing
September	Week5	Menus, Creating
	Week 6	Editing & Formatting Document
	Week 7	Spell Checking, Printing.
	Week 8	Advanced Word Processing: Views, Tables
October	Week 9	modifying page setup, applying document themes
	Week10	applying document style sets, Inserting headers and footers
	Week 11	Spread Sheet: Elements of Electronics Spread Sheet, Applications, Creating and Opening of Spread Sheet, Menus.
	Week 12	Manipulation of cells: Enter texts numbers and dates, Cell Height and Widths, copying of cells
November	Week 13	Mathematical, Statistical and Financial function, Drawing different types of charts
	Week 14	Sort and Filter Data
	Week 15	Creating Presentation, Type of presentation views. Using sound, Animation,
	Week 16	Working with Objects, Printing , Revision of UNIT- 1&2

Lesson Plan

VAC Digital Environment

Class: B.A./B.Com./B.Sc./ Ist Sem.

Name of Month	Weekly Description	Contents
August	Week 1	Introduction to Digital Empowerment
	Week 2	Digital Empowerment: Needs and challenges
	Week 3	Vision of Digital India: DigiLocker, E-Hospitals
	Week 4	E-Pathshala, BHIM
September	Week 5	e-Kranti (Electronic Delivery of Services), e-Health Campaigns
	Week 6	Public utility portals of Govt. of India such as RTI, Health
	Week 7	Finance, Income Tax filing, Education. Test-1, Assignment-1
	Week 8	Electronic Communication: Electronic mail, blogs, social media
October	Week 9	Tools/platforms for online learning
	Week 10	Collaboration using file sharing, messaging, video conferencing
	Week 11	Doubt Session and Test
	Week 12	Safe and Secure Cyberspace: Online security and privacy,
November	Week 13	Data breach and Cyber Attacks, Security Initiatives by the Govt of India
	Week 14	Ethics in Cyberspace
	Week 15	Revision of UNIT-1
	Week 16	Revision of UNIT-2