

Semi Design

find you way in #VLSI with us

C & DS

1. Introduction classes

- a. Basic syntax & programming structure
- b. Data types
- c. Variables & operators
- d. If selection statement
- e. If – else statement
- f. If – elseif – else statement
- g. Nested if statement
- h. Switch statement

2. Conditional statements or looping

- a. While, do-while
- b. For, nested-for statements
- c. Infinite loops

3. Array

- a. Introduction to array
- b. Initialization & defining arrays
- c. 1-D, 2-D array

4. Functions

- a. Need of function
- b. Function types & categories
 - i. no return type, no arguments
 - ii. no return type, with arguments
 - iii. with return type, no arguments
 - iv. with return type, with arguments
- c. Steps to create user defined functions
- d. Understanding of arguments

5. Bitwise Operator programming

- a. Shifting programs
- b. Program for finding number even or odd
- c. Print binary of a number
- d. Make bit toggle(on/off)

6. Pointers

- a. The purpose of pointers
- b. Defining pointers
- c. The & and * operators
- d. Pointer Assignment

- e. Pointer Arithmetic
 - f. Multiple indirections
 - g. Advanced pointer types
 - h. Generic and Null Pointer Function Pointers
 - i. Pointers to Arrays and Strings
 - j. Array of Pointers
 - k. Pointers to Structure and Union
 - l. Pointers to Dynamic memory
 - m. Far, Near and Huge Pointers
 - n. Pointer Type Casting
7. Dynamic Memory Allocation
- a. Malloc()
 - b. Calloc()
 - c. Realloc()
 - d. Free()
8. Structure
- a. Initialization of structure
 - b. Structure with function & pointers
 - c. Nested structure
9. String
- a. String implementation
 - b. String operations
 - c. Programming
10. Data Structures
- a. Linear & non-linear
 - b. Homogeneous & non-homogeneous
 - c. Static & Dynamic
 - d. Single, Double & Circular Linked Lists
 - e. Stacks & Queues
 - f. Binary Trees
11. Sorting and Searching Techniques
- a. Insertion, Selection, Bubble, Merge, Quick, Heap