



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY : PUTTUR
(AUTONOMOUS)**

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QUESTION BANK (DESCRIPTIVE)

Subject with Code : Introduction to Programming(23CS0501)

Year &Sem: I-B.Tech & I-Sem

Course & Branch: B.Tech-Common to All

Regulation: R23

UNIT-I

1		Explain the basic organization of a computer, focusing on the roles of the Arithmetic Logic Unit (ALU), memory, input-output units, and the program counter	[L2,CO1]	10M
2	a)	Define algorithm. Explain the characteristics of an algorithm	[L1,CO1]	5M
	b)	Design an algorithm for finding average of three number	[L3,CO1]	5M
3	a)	Define a flow chart. List the different symbols in flowchart.	[L1,CO1]	5M
	b)	Explain the flow chart symbols with example.	[L2,CO1]	5M
4	a)	Define a pseudo code and explain with an example.	[L1,CO1]	5M
	b)	Explain how to compile and execution of a program with neat diagram.	[L2,CO1]	5M
5	a)	What is meant by data type. List the different data types with their sizes.	[L1,CO1]	5M
	b)	Define a variable. Write the variable declaration. What are the rules for declaring a variable?	[L1,CO1]	5M
6		Define constant. List and explain the different constants in C language.	[L1,CO1]	10M
7		List and explain the Various operators with example.	[L2,CO1]	10M
8	a)	What is meant by type conversion? Explain the different types conversion techniques with example	[L2,CO1]	5M
	b)	Differentiate Top-down and bottom-up approach.	[L4,CO1]	5M
9	a)	State the difference between Time complexity and Space Complexity.	[L4,CO1]	5M
	b)	Compose a C program for to perform all the arithmetic operations.	[L6,CO1]	5M
10	i)	Define an algorithm.	[L1,CO1]	2M
	ii)	List the different flow chart symbols.	[L1,CO1]	2M
	iii)	Define with example any four operators in C.	[L1,CO1]	2M
	iv)	What is meant by type conversion?	[L1,CO1]	2M
	v)	Describe input and output statements in C.	[L2,CO1]	2M

UNIT-II

1	a)	List the different decision statements available in C	[L1, CO2]	5M
	b)	Discuss each decision statement with suitable example	[L2, CO2]	5M
2		Write the syntax and illustrate the following statements with example i) if Statement ii) if else Statement iii) else if ladder iv) Nested if statements v) Switch Case	[L3, CO2]	10M
3	a)	Develop a C Program to find whether the given number is even or odd	[L6, CO2]	5M
	b)	Create a C Program to find greatest of three numbers using nested if else statement	[L6, CO2]	5M
4	a)	Write a C Program to reverse a given number.	[L6, CO2]	5M
	b)	Apply switch case statement to write a C program that performs arithmetic operations	[L3, CO2]	5M
5	a)	Discuss the different looping statements with syntax in C	[L3, CO2]	5M
	b)	Explain the For Loop with syntax and example.	[L2, CO2]	5M
6	a)	Differentiate While and Do-while loop with example.	[L4 , CO2]	5M
	b)	Construct a C Program to Perform Fibonacci series using for loop	[L6, CO2]	5M
7	a)	Explain a nested for loop with syntax.	[L2, CO2]	5M
	b)	Compose a c program to print following series. * * * * * * * * * *	[L6, CO2]	5M
8	a)	Describe the below looping statements with example i. While Loop ii. Do-while loop iii. For loop	[L2, CO2]	5M
	b)	Discuss about break and continues statements in C.	[L3, CO2]	5M
9	a)	Compose a C program to print following series 1 2 2 3 3 3 4 4 4 4	[L6, CO2]	5M
	b)	Compose a C program to print following series * * * * * * * * * *	[L6, CO2]	5M
10	i)	What is meant by control statement?	[L1, CO2]	2M
	ii)	State the syntax for nested if else statement.	[L1, CO2]	2M
	iii)	Compare while and do-while statement.	[L4, CO2]	2M
	iv)	Describe the syntax of for Loop.	[L2, CO2]	2M
	v)	Summarize break and continue keyword.	[L2, CO2]	2M

UNIT-III

1	a)	Define an Array. Write the syntax for declaring and initializing array with example.	[L1, CO2]	5M
	b)	Describe the array subscript in C with example	[L2, CO2]	5M
2	a)	List the different types of arrays.	[L1, CO2]	2M
	b)	Explain the One-Dimensional array with example.	[L2, CO2]	8M
3	a)	Explain the Two-Dimensional array with example	[L2, CO2]	5M
	b)	Compose a C program for Transpose of a given matrix	[L6, CO2]	5M
4	a)	Develop a C program to display array of elements in given and reverse order.	[L3, CO2]	5M
	b)	Compose a C program to find the sum of diagonal elements in an array	[L6, CO2]	5M
5	a)	Create a C program to perform the addition of two matrices.	[L6, CO2]	5M
	b)	Compose a C program to calculate sum of an array elements.	[L6, CO2]	5M
6	a)	Create a C program to count the vowels, consonants, special symbols and space in a given string.	[L6, CO3]	5M
	b)	Create a C program to perform the following string library function strlen(), strcpy(), strcat(), strcmp().	[L6, CO3]	5M
7	a)	List and discuss the different string handling functions.	[L2, CO3]	5M
	b)	Apply string handling functions in C program.	[L3, CO3]	5M
8	a)	Illustrate a C program to find reverse of a given string without using string handling functions.	[L2, CO3]	5M
	b)	Summarize the following i) strcat ii) strcmp iii) strrev iv) strcpy	[L3, CO3]	5M
9	a)	Differentiate Character and String with example.	[L4, CO3]	5M
	b)	Develop a C program that implement strlen(), strlen() andstrupr().	[L3, CO3]	5M
10	i)	Define 1D array.	[L1, CO3]	2M
	ii)	Recall 2D array.	[L1, CO3]	2M
	iii)	Explain how to initialize the 1D array.	[L2, CO3]	2M
	iv)	Define String.	[L1, CO3]	2M
	v)	List the different string handling functions	[L1, CO3]	2M

UNIT-IV

1	a)	Define pointer. Write the syntax for declaring pointer with example.	[L1, CO4]	5M
	b)	Describe about pointers and arrays	[L2, CO4]	5M
2	a)	Explain the concept of array of pointers with examples	[L2, CO4]	5M
	b)	What are the features of pointers? Write a C program to print address of a variable	[L1, CO4]	5M
3	a)	Explain the concept of pointer to pointers with examples	[L2, CO4]	5M
	b)	Discuss the concept of void pointers with examples.	[L2, CO4]	5M
4	a)	List and describe about dynamic memory management functions in C	[L1, CO4]	5M
	b)	Summarize the following with example i. malloc(), ii. calloc(), iii. realloc() and iv. free()	[L2, CO4]	5M
5	a)	How can pointer works on strings?	[L2, CO4]	5M
	b)	Examine the access to address of the pointer with example?	[L3, CO4]	5M
6	a)	Define structure and give the general syntax for structure with suitable example program.	[L1, CO6]	5M
	b)	Illustrate the procedure to declare and initialize a structure with an example C program	[L2, CO6]	5M
7	a)	Define structure within a structure? Explain with an example.	[L2, CO6]	5M
	b)	Describe about array of structures	[L2, CO6]	5M
8	a)	Apply and explain the concept of pointers to structure in a C program	[L3, CO6]	5M
	b)	Explain about nested structures	[L2, CO6]	5M
9	a)	Illustrate the use of type def with suitable example.	[L2, CO4]	5M
	b)	Explain about Enumerated data type.	[L2, CO4]	5M
10	i)	What is pointer?	[L1, CO4]	2M
	ii)	Explain how to assign an address to pointer variable.	[L2, CO4]	2M
	iii)	Define void pointer.	[L1, CO4]	2M
	iv)	What is meant by structure and write the syntax for structure declaration.	[L1, CO6]	2M
	v)	Differentiate structure and union.	[L4, CO6]	2M

UNIT-V

1	a)	Define function. Explain the types of functions with an example	[L2, CO5]	5M
	b)	Develop a C program to swap two numbers using functions	[L6, CO5]	5M
2	a)	Explain the library functions available in C?	[L2, CO5]	5M
	b)	Discuss in detail how communication is established among functions in C language?	[L2, CO5]	5M
3	a)	Distinguish between call by value and call by reference with an example programs	[L4, CO5]	5M
	b)	How to use Array as Function argument? Explain with an example program.	[L1, CO5]	5M
4	a)	Create a c program for addition of two numbers using function	[L6, CO5]	5M
	b)	Describe about scope and distinguish between local and global variable	[L4, CO5]	5M
5	a)	Discuss - how to modify parameters inside functions using pointers.	[L2, CO5]	5M
	b)	Compose a C program to swap two numbers using call by reference.	[L6, CO5]	5M
6		Define File. Explain different file operations with examples	[L2, CO6]	10M
7	a)	List the different file operations in C with their definition and syntax	[L1, CO6]	5M
	b)	Explain read () and write () operation with examples.	[L2, CO6]	5M
8		Summarize the following with examples. i) Read() ii) write() iii)append()	[L2, CO6]	10M
9		Illustrate a C program to append the Content of file at the end of another file	[L2, CO6]	10M
10	i)	What is meant by function and list the different types of function.	[L1, CO5]	2M
	ii)	What is meant by call-by-value?	[L1, CO5]	2M
	iii)	Define Call-by-reference.	[L1, CO5]	2M
	iv)	Define file.	[L1, CO6]	2M
	v)	List the different file operations in C.	[L1, CO6]	2M