

# Programming for problem solving(23CS205)



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**NARSIMHA REDDY ENGINEERING COLLEGE**  
PERMANENTLY AFFILIATED TO JNTUH, HYDERABAD - APPROVED BY AICTE, NEW DELHI  
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UGC AUTONOMOUS

B. Tech I Year Syllabus (w. e. f AY 2023-2024)

## Unit wise question Bank

### UNIT-I

S.No	Questions	BT	CO	PO
<b>Part – A (Short Answer Questions)</b>				
1	What is a compiler?	L1	CO1	PO1
2	Write the steps of execution of a program.	L1	CO1	PO1
3	What is an algorithm?	L1	CO1	PO2
4	What is a flowchart?	L1	CO1	PO2
5	List out various operators?	L1	CO1	PO1
6	What is an expression evaluation?	L1	CO1	PO1
7	Write are the conditional statements?	L1	CO1	PO1
8	What are variables and datatypes?	L1	CO1	PO1
9	What are the different types of storage classes?	L1	CO1	PO1
10	What are command line arguments?	L1	CO1	PO2
<b>Part – B (Long Answer Questions)</b>				
11	a) Write an Algorithms for finding roots of a quadratic equations.	L2	CO1	PO1
	b) write an algorithm for finding minimum and maximum numbers of a given set.	L2	CO1	PO1
12	a) Give a brief note on Program design and structured programming.	L1	CO1	PO1
	b) Write Flowchart/Pseudocode for finding if a number is prime number.	L3	CO1	PO1
13	a) Describe expressions and its precedence.	L2	CO1	PO1
	b) Explain in detail about Operators.	L2	CO1	PO2
14	a) Explain in detail about Conditional Branching statements.	L2	CO1	PO1
	b) Give a brief note on different types of loops.	L2	CO1	PO1
15	a) Explain about formatted I/O.	L2	CO1	PO2
	b) Give a brief note on stdin, stdout and stderr.	L1	CO1	PO2

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### UNIT-II

S.No	Questions	BT	CO	PO
<b>Part – A (Short Answer Questions)</b>				
1	What is an Array?	L1	CO2	PO2
2	How to create an array?	L1	CO2	PO2
3	How to access array elements?	L1	CO2	PO2
4	How to manipulate elements of an array?	L1	CO2	PO1
5	Differentiate one- and two-dimensional array.	L2	CO2	PO1
6	What is string?	L1	CO2	PO1
7	List the string functions.	L1	CO2	PO1
8	What is a structure?	L1	CO2	PO2
9	What is a union?	L1	CO2	PO1
10	What is a pointer?	L1	CO2	PO1
<b>Part – B (Long Answer Questions)</b>				
11	a) Give a brief note on one- and two-dimensional arrays.	L1	CO2	PO1
	b) Explain about handling strings as array of characters.	L3	CO2	PO1
12	a) Write in detail about basic string functions available in C (strlen, strcat, strcpy, strstr)	L1	CO2	PO1
	b) Explain about array of string.	L2	CO2	PO2
13	a) Give a brief note on structures.	L1	CO2	PO1
	b) Explain about Array of structures.	L1	CO2	PO1
14	a) Differentiate union and Enum data types.	L2	CO2	PO1
	b) Give a brief note on pointers with an example program.	L3	CO2	PO1
15	a) Explain Use of Pointers in self-referential structures.	L3	CO2	PO1
	b) usage of self-referential structures in linked list.	L3	CO2	PO1

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### UNIT-III

S. No	Questions	BT	CO	PO
<b>Part – A (Short Answer Questions)</b>				
1	What is a function?	L1	CO3	PO1
2	What is a signature of a function?	L1	CO3	PO1
3	Write about Parameters and return type of a function	L1	CO3	PO1
4	What is call by value?	L2	CO3	PO2
5	What is call by reference?	L1	CO3	PO1
6	What is a recursion?	L1	CO3	PO1
7	What are the limitations of a recursion?	L1	CO3	PO1
8	What is dynamic Memory Allocation?	L1	CO3	PO1
9	What is calloc()?	L1	CO3	PO1
10	What is malloc()?	L1	CO3	PO1
<b>Part – B (Long Answer Questions)</b>				
11	a) Describe function with its parameters, return type and signature.	L2	CO3	PO1
	b) What is passing parameters to a function explain with an example Program?	L3	CO3	PO1
12	a) What is call by value explain with an example program?	L3	CO3	PO1
	b) What is call by reference explain with an example program?	L3	CO3	PO1
13	a) What is a recursion? write some limitations of a recursive function with example program.	L2	CO3	PO2
	b) Give a brief note on dynamic memory allocation.	L1	CO3	PO1
14	a) Write about Some C standard functions and libraries.	L1	CO3	PO1
	b) Explain in detail about passing pointers to functions.	L3	CO3	PO1
15	a) Write in detail of C standard functions and libraries.	L2	CO3	PO1
	b) Differentiate malloc () and calloc() functions.	L2	CO3	PO1

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### UNIT-IV

S.No	Questions	BT	CO	PO	
<b>Part – A (Short Answer Questions)</b>					
1	What is searching?	L1	CO4	PO1	
2	Explain linear searching?	L1	CO4	PO1	
3	What is binary searching?	L1	CO4	PO1	
4	What is sorting?	L1	CO4	PO2	
5	Explain bubble sorting?	L1	CO4	PO1	
6	What is insertion sorting?	L1	CO4	PO1	
7	What is selection sorting?	L1	CO4	PO2	
8	State the order of complexity?	L1	CO4	PO1	
9	Classify the best case, worst case, average of various searching techniques?	L2	CO4	PO1	
10	Classify the best case, worst case, average of various sorting techniques?	L2	CO4	PO1	
<b>Part – B (Long Answer Questions)</b>					
11	a)	What is searching? Explain about linear searching algorithm in arrays.	L3	CO4	PO1
	b)	Give a brief note on binary searching.	L1	CO4	PO2
12	a)	Write a program of binary searching with an output.	L3	CO4	PO2
	b)	What is sorting? Explain selection sorting.	L1	CO4	PO2
13	a)	Explain in detail about bubble sorting algorithm.	L2	CO4	PO2
	b)	Write bubble sorting program with an output.	L3	CO4	PO1
14	a)	Explain insertion sorting with an example program.	L1	CO4	PO1
	b)	Explain the basic concept of order of complexity through the example program.	L1	CO4	PO1
15	a)	Explain best case, average case and worst-case scenario of any searching algorithm.	L1	CO4	PO1
	b)	Explain best case, average case and worst-case scenario of any sorting algorithm.	L3	CO4	PO1

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## UNIT-V

S.No	Questions	BT	CO	PO
<b>Part – A (Short Answer Questions)</b>				
1	What is a Preprocessor directive?	L1	CO5	PO1
2	List the preprocessor directives?	L1	CO5	PO2
3	What is file?	L1	CO5	PO1
4	Explain text file.	L1	CO5	PO3
5	What is a binary file?	L1	CO5	PO4
6	How to create and read data in text file?	L2	CO5	PO4
7	How to create and read data in binary file?	L2	CO5	PO4
8	How to write, append data into text and binary files?	L2	CO5	PO2
9	What is the use of a fseek function?	L1	CO5	PO3
10	Differentiate ftell and rewind functions	L2	CO5	PO4
<b>Part – B (Long Answer Questions)</b>				
11	a) Write a brief note on Commonly used Preprocessor commands like include, define, undef, if, ifdef, ifndef.	L1	CO5	PO2
	b) What is file? Differentiate text and binary files.	L2	CO5	PO1
12	a) Explain about Creating, Reading and writing text file.	L1	CO5	PO1
	b) Explain about Creating, Reading and writing binary file.	L2	CO5	PO1
13	a) Write in detail about file access modes of text and binary files.	L1	CO5	PO1
	b) Describe Random access using fseek, ftell and rewind functions.	L3	CO5	PO2
14	a) How to Appending data to existing files?	L2	CO5	PO2
	b) Write about Writing and reading structures using binary files.	L1	CO5	PO1
15	a) Differentiate text file and binary file.	L2	CO5	PO2
	b) Explain different modes of text file and binary file.	L2	CO5	PO1

**Blooms Taxonomy Level (BT) (L1 – Remembering; L2 – Understanding; L3 – Applying; L4 – Analyzing; L5 – Evaluating; L6 – Creating)**

**Course Outcomes (CO)**

**Program Outcomes (PO)**