

CMR TECHNICAL CAMPUS
UGC AUTONOMOUS
B.Tech. I Semester, Question Bank
Department of H&S

Subject: Programming for problem solving
Academic Year:-2024-25
Subject Code: 22CS103ES

Semester:-I

PART -A

Q. No	Question	Marks	BL	CO	Unit no
1	What is the purpose of main () function in C?	2 M	L2	CO1	I
2	List the basic datatypes in C.	2 M	L1	CO1	I
3	What is the importance of Linking and Definition section in C?	2 M	L1	CO1	I
4	Describe the difference between = and == operators in C.	2 M	L2	CO1	I
5	Define Variable with syntax. Give an example.	2 M	L1	CO1	I
6	Differentiate between compiler and interpreter.	2 M	L1	CO1	I
7	Define multidimensional array. List the advantages of Arrays.	2 M	L1	CO2	II
8	Distinguish between String & Character.	2 M	L2	CO2	II
9	Define Structure with syntax.	2 M	L1	CO2	II
10	What are the advantages of loops?	2 M	L1	CO2	II
11	List the types of conditional statements.	2 M	L1	CO2	II
12	Define Union with syntax.	2 M	L1	CO2	II
13	Define Pointer. List the types of pointers.	2 M	L1	CO3	III
14	What is the use of pointers in Self-referential Structures?	2M	L1	CO3	III
15	Discuss the advantages of Pointers.	2 M	L1	CO3	III
UPTO MID-I					
16	Write the syntax of fopen().	2 M	L1	CO3	III
17	Define a File.	2M	L1	CO3	III
18	Write the syntax of fseek() function.	2M	L1	CO3	III
19	Define a function. List the advantages of functions.	2M	L1	CO4	IV
20	What is the Function signature in C?	2M	L1	CO4	IV

21	List the types of Storage classes in C.	2M	L1	CO4	IV
22	Define Recursion. What are the limitations of functions?	2M	L1	CO4	IV
23	What is the advantage of Dynamic Memory Allocation?	2M	L1	CO4	IV
24	List some standard library functions.	2M	L1	CO4	IV
25	Tell the advantage of Linear Search.	2M	L1	CO5	V
26	What is the Time complexity of Bubble sort in best case?	2M	L1	CO5	V
27	What is the Time complexity of Binary search in best case?	2M	L1	CO5	V
28	Compare Linear search and Binary search.	2M	L1	CO5	V
29	Compare selection sort and insertion sort.	2M	L1	CO5	V
30	List out Sorting Techniques.	2M	L1	CO5	V

PART-B

Q. No	Question	Marks	BL	CO	Unit no
1	What are the rules of identifiers in C?	4 M	L1	CO1	I
2	Write a C program to find the sizes of all data types.	4 M	L2	CO1	I
3	Explain about Precedence, Associativity and Expression evaluation.	4 M	L1	CO1	I
4	Write a C program to find the maximum of two numbers using a ternary operator.	4 M	L5	CO1	I
5	Draw a flowchart to find the largest of two numbers.	4 M	L3	CO1	I
6	Write a C program to swap two variables without using third variable.	4 M	L4	CO1	I
7	Explain about the various steps involved in creating and running a C program.	8 M	L2	CO1	I
8	What is meant by Operator? List the types of Operators and explain any four operators with a C program	8 M	L4	CO1	I
9	Define type casting and explain in detail about implicit and explicit type casting with example programs.	8 M	L3	CO1	I

10	Write a C program to find the maximum of three numbers.	4 M	L2	CO2	II
11	Write a C program to find the sum of digits of a given number.	4 M	L3	CO2	II
12	Write a C program to find out the maximum element from an array.	4 M	L4	CO2	II
13	Write in detail about any five string handling functions with examples.	4 M	L1	CO2	II
14	Explain in detail about declaring two dimensional arrays, reading elements and displaying the elements of it.	4 M	L2	CO2	II
15	Write a C program to test whether the given number is a prime or not.	4 M	L3	CO2	II
16	Explain in detail about pre- test/Entry Controlled and post- test/Exit controlled loops with example programs.	8 M	L2	CO2	II
17	Explain in detail about decision making statements with suitable examples.	8 M	L2	CO2	II
18	Write a C program to implement matrix multiplication.	8 M	L3	CO2	II
19	Define Pointer. What are the types of Pointers? Explain with examples.	4M	L1	C03	III
20	Explain the concept of Pointer to Pointer with example.	4M	L2	C03	III
21	Write a C Program to demonstrate Pointers to Arrays.	4M	L3	C03	III
22	Write a C Program to demonstrate Pointers to Structures.	4M	L3	C03	III
23	Explain the concept of Self-referential - Structures with example.	4M	L1	C03	III
UPTO MID-I					
24	Distinguish between text and binary files. Explain basic file opening modes with examples.	4M	L4	C03	III
25	List the various random- access file and explain in detail about its functions with their syntax and suitable examples.	4M	L4	C03	III
26	Write a C program to copy content of one file to another file.	4M	L3	C03	III

27	Write a C program to merge two files into third file.	4M	L4	C03	III
28	Write a program in C to read and print from an existing file.	4M	L4	C03	III
29	Discuss about the different categories of functions.	4M	L2	C04	IV
30	Write a C program to illustrate call by value-parameter passing technique.	4M	L2	C04	IV
31	Write a C program to find the factorial of a given number using recursion.	4M	L4	C04	IV
32	Write a C program to illustrate call by reference - parameter passing technique	4M	L2	C04	IV
33	Build a C program to generate Fibonacci series using recursion.	4M	L4	C04	IV
34	Explain how a Function is declared, called and defined with example.	4M	L2	C04	IV
35	Write about Dynamic Memory Allocation (DMA) functions with syntax and examples.	8M	L2	C04	IV
36	Compare call by value and call by reference methods of passing parameters to an user defined swap function to exchange value	8M	L3	C04	IV
37	What is the difference between Recursion and Non-recursion function. Explain with example programs.	8M	L2	C04	IV
38	Construct a C program to find the position of a target value with in an array using Linear search.	4M	L3	C05	V
39	Which searching techniques is best among linear search and binary search justify your answer?	4M	L5	C05	V
40	Compare the advantage and disadvantage of Bubble, Selection and Insertion sorting techniques.	4M	L3	C05	V
41	Compare searching and sorting techniques.	4M	L2	C05	V
42	Explain about binary search Technique with example.	4M	L1	C05	V
43	Sort the sequence 3,1,4,5,9,2,6,5 using insertion sort.	4M	L3	C05	V
44	Develop a C program and algorithm to sort given array elements using Bubble sort. Trace the program with list of elements 567,342,89,100,882,902,14,99,390	8M	L3	C05	V

45	Develop a C program and algorithm to sort given array elements using Selection sort. Trace the program with list of elements 87,54,98,34,27,88,36,12,90,23.	8M	L3	C05	V
46	Develop a C program and algorithm to sort given array elements using Insertion sort. Trace the program with list of elements 35,18,7,12,5,48,26,52,80,28.	8M	L3	C05	V

