

Seat No.:	Q. Paper Code: FTC-A-029		SET	P	
	Fabtech Technical Campus, College of Engineering & Research, Sangola				
	(An Autonomous Institute)				
	Computer Science and Engineering, Artificial Intelligence and Data Science				
	Academic Year: -2025-26, Semester-I				
Computer Programming and Problem Solving (25UCS11001)					
Regular End Semester Examination 2025-26 [Dec./Jan.]					
Class:	F. Y. B. Tech.	Day & Date:	Saturday, 17/01/2026		
Duration:	03 Hrs.	Max. Marks:	60 Marks		
Time:	10:00 AM TO 01:00 PM				
Instructions:					
a) Q. No. 1 is compulsory. It should be solved in the first 30 minutes in the Page No.3 of answersheet.					
b) Don't forget to mention the question paper set (P/Q/R) on the top of the page 3.					
Q. 1	Multiple Choice Questions (MCQs) Each question carries 1 mark			Marks: 10	
				CO	BL
1	Which operator is used for Logical AND operation in C a) b) & c) && d)			1	2
2	Which of the following is not valid C data type a) int b) char c) bool d) string			1	2
3	Which statement is used to exit a loop prematurely in C? a). exit b) break c) continue d). return			2	2
4	What is the correct syntax for a do-while loop in C? a)do { ... } while(condition); b) do { ... } while(condition) c) while(condition) { ... } do; d) do { while(condition); }			2	2
5	What is index of the first element in a C array. a) 1 b) 0 c) -1 d) garbage			3	2
6	What does the following pointer declaration mean? int *ptr; a.)ptr is a pointer to an integer b) ptr is an integer c) ptr is a pointer to a float			3	3

	d) None of the above		
7	Which approach is more suitable for solving complex problems that involve multiple sub-problems? a) Top-down b) Bottom-up c) Both a and b d) Neither a nor b	4	2
8	Which of the following is a step in the problem-solving process? a) Defining the problem b) Ignoring the problem c) Analyzing the solution d) Implementing the solution without testing	4	2
9	In which of the following is used for the keywords in structure a) Structure b) Struct c) both d) none	5	1
10	What is the purpose of the fclose() function in C? a) To open a file b) To close a file c) To read from a file d) To write to a file	5	2

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Q. No.	Questions			Marks	CO	BL
Q. 2	Attempt any two of the following			10		
1	Define Flowchart and Draw a flowchart for the following algorithms 1) Start 2) Read the values for Base(B) & Height (H) 3) Area=1/2*B*H 4) Display Area 5. Stop.			5	1	2
2	Explain data types in C with example			5	1	3
3	Describe the conditional (ternary) operator and write a program to find the maximum of two numbers using it.			5	1	2,3
Q. 3	Attempt any two of the following			10		
1	Compare the while and do-while loops with example programs.			5	2	4
2	Illustrate the control structures used in 'C' language? Explain following control, a. If – else b. Switch – case.			5	2	3
3	Write a program to display an even and odd number. Also draw the Flowchart for it.			5	2	2
Q. 4	Attempt any two of the following			10		
1	Write a program in C that reverse the elements of given array.			5	3	3
2	Illustrate string manipulation techniques with example			5	3	2
3	Describe the basics of user-defined functions and write a function to calculate the factorial of a number			5	3	3

Q. 5	Attempt any two of the following	10		
1	Explain the steps involved in problem solving.	5	4	2
2	Compare Top down And Bottom-up Approach. With suitable example.	5	4	4
3	Explain Trial and Error problem solving strategy using example.	5	4	2
Q. 6	Attempt any two of the following	10		
1	Define a Structure Account with members account number, account holders name, account balance. Create an array of account structure to store information of 5 accounts.	5	5	3
2	Write a C program to read and write data to a file using fprintf() and fscanf().	5	5	4
3	Compare the structures and array and define Structure?	5	5	4

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	c) To read from a file d) To write to a file		
6	Which operator is used for Logical AND operation in C a) b) & c) && d)	1	2
7	Which of the following is not valid C data type a) int b) char c) bool d) string	1	2
8	Which statement is used to exit a loop prematurely in C? a). exit b) break c) continue d). return	2	2
9	What is the correct syntax for a do-while loop in C? a) a)do { ... } while(condition); b) b) do { ... } while(condition) c) c) while(condition) { ... } do; d) d) do { while(condition); }	2	2
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3	Describe the basics of user-defined functions and write a function to calculate the factorial of a number			5	3	3

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3	What is the purpose of the fclose() function in C? a) To open a file b) To close a file c) To read from a file d) To write to a file				5	2
4	Which operator is used for Logical AND operation in C a) b) & c) && d)				1	2
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7	<p>What is the correct syntax for a do-while loop in C?</p> <p>a) do { ... } while(condition); b) do { ... } while(condition) c) while(condition) { ... } do; d) do { while(condition); }</p>	2	2
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