

QP CODE: D2BCS2401	(Pages: 2)	Reg. No : .....
		Name : .....
SECOND SEMESTER FYUGP EXAMINATION, APRIL 2025		
MAJOR COURSE		
CSC2CJ101/BCA2CJ101 : Fundamentals of Programming (C language)		
(Credits: 4)		
Time: 2 Hours	Maximum Marks: 70	
Section A		
Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)		
1. What is the difference between scanf and gets functions in C?	BL1	CO1
2. Explain how structures can be used within functions in C with an example.	BL2	CO4
3. Write and explain the syntax of a while loop.	BL2	CO2
4. What is recursion? Provide an example of a recursive function.	BL2	CO1
5. What are variables in C? Explain with an example.	BL2	CO1
6. Define a one-dimensional array. Explain its declaration and initialization in C with examples.	BL2	CO4
7. Use pointer arithmetic to reverse an array in a program.	BL2	CO1, CO5, CO6
8. Rewrite the given if-else structure using switch statement. <pre> if (grade == 'A')     printf("Excellent"); else if (grade == 'B')     printf("Good"); else if (grade == 'C')     printf("Average"); else     printf("Fail"); </pre>	BL3	CO2
9. How can we print the <b>address</b> and <b>value</b> of a variable using pointers?	BL2	CO1, CO5
10. What is meant by a function prototype in C?	BL1	CO1, CO4
(PTO)		

<b>Section B</b>		
<b>Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)</b>		
11. What are arithmetic operations on characters in C? Explain with an example.	BL2	CO4
12. Discuss three reasons why C is considered as an efficient and widely used programming language. Provide examples of its real-world applications.	BL2	CO1
13. Explain the importance of dynamic memory allocation in C.	BL2	CO1, CO5
14. What are special operators in C? Explain with examples.	BL2	CO1
15. Compare and contrast the break and continue statements in C programming. Illustrate with examples.	BL2	CO2
16. How is memory allocated for a dynamic array in C/C++? Explain with an example.	BL2	CO4
17. Explain the different types of return values in C with suitable examples.	BL2	CO1
18. Implement a C program that utilizes nested if-else statements to compare three numbers input by the user and determine the largest among them.	BL3	CO1, CO2
<b>Section C</b>		
<b>Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)</b>		
19. Write a C program that takes an array of integers from the user, passes it to a function, and displays the maximum element in the array. Explain how arrays are passed to functions.	BL3	CO1, CO3
20. Write a program demonstrating arrays within structures. Explain how memory is allocated.	BL3	CO1, CO2, CO3, CO4, CO6
<b>CO : Course Outcome</b>		
<b>BL : Bloom's Taxonomy Levels</b> (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)		