

ANURAG Engineering College

(An Autonomous Institution)

I B.Tech I Semester Regular/Supplementary Examinations, January - 2025

C PROGRAMMING AND DATA STRUCTURES

(COMMON TO CIVIL & EEE)

Time: 3 Hours**Max. Marks: 60****Section – A (Short Answer type questions)****(10 X 1M = 10M)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. List the Bitwise Operators.	CO1	L1	1M
2. Find the output of the following program. #include <stdio.h> void main() { 1 < 2 ? printf(" 1 ") : printf(" 2"); }	CO1	L2	1M
3. List the loop control statements in C?	CO2	L1	1M
4. Explain about array initialization with example?	CO2	L2	1M
5. List the dynamic memory handling functions used in 'C'.	CO3	L1	1M
6. Define pointer.	CO3	L2	1M
7. Define enumerated data type?	CO4	L1	1M
8. List basic operations of a file?	CO4	L2	1M
9. What is the time complexity?	CO5	L1	1M
10. Write the condition if queue is full or not?	CO5	L2	1M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11. A) Examine and discuss the structure of C program with example?	CO1	L3	10M
OR			
B) Classify various datatypes available in C with examples?	CO1	L3	10M
12. A) Develop a C program to find the transpose matrix of a given matrix? Example: Given matrix: 1 2 3 4 5 6 Transpose of the matrix: 1 4 2 5 3 6	CO2	L3	10M
OR			
B) Distinguish the break and continue statements with examples?	CO2	L3	10M
13. A) Inspect and write about the process of call by value and call by reference with example?	CO3	L3	10M
OR			
B) Develop a C program to check whether a string is palindrome or not.	CO3	L3	10M

14. A) Compare and contrast structure and Union with examples? CO4 L3 10M
OR
B) Create a structure named employee containing name, age and basic pay. Write a C program to create 5 employee records and write them into a file. Then read the records from file and display it. CO4 L3 10M
15. A) Make use of a queue data structure explain the operations performed on simple queue with an example? CO5 L3 10M
OR
B) Develop a C program to delete a node from a single linked list? CO5 L3 10M