

ANURAG Engineering College**(An Autonomous Institution)****I B.Tech II Semester Supplementary Examinations, June/July - 2024****PROGRAMMING FOR PROBLEM SOLVING – II****(COMMON TO ALL BRANCHES)****Time: 3 Hours****Max. Marks: 75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Define Union? How to represent a union?	CO1	L1	2M
2. What are the Different ways of representing Structures and Functions?	CO1	L2	3M
3. What is array of strings?	CO2	L1	2M
4. Write a program using pointer to swap two numbers.	CO2	L2	3M
5. Write about different file modes?	CO3	L1	2M
6. Write a C program that reads contents of a file and displays then in capital letters if they are letters.	CO3	L2	3M
7. Write the applications of queue data structure.	CO4	L1	2M
8. What is data structure? Explain various types of data structure.	CO4	L2	3M
9. Write the applications of linked list.	CO5	L1	2M
10. Give algorithm to sort a list using bubble sort	CO5	L2	3M

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

11. A) Write a c-program using structures to read, write, compute average - marks and display the students scoring above and below the average marks for a class of N students.	CO1	L3	10M
OR			
B) Give the general template for union. List out the differences between unions, structures and arrays	CO1	L2	10M
12. A) What are the features of pointers? Write a C program to print address of a variable. Explain the declaration of pointers and pointer to pointer with examples	CO2	L3	10M
OR			
B) Explain the concept of functions returning pointers with example. Write a C program to read and print an array of elements using pointers.	CO2	L3	10M
13. A) Discuss command line arguments in detail with examples. Write a short notes on i. fgets() ii. fputs()	CO3	L3	10M
OR			
B) Write a C program to count number of characters, spaces, lines, words of a file.	CO3	L3	10M
14. A) What is queue? Why it is known as FIFO? Write an algorithm to insert and delete an element from a simple queue.	CO4	L3	10M
OR			
B) What is stack? Why it is known as LIFO? Write algorithm of PUSH and POP operation on stack.	CO4	L3	10M

15. A) Write an algorithm to implement Bubble sort with suitable example CO5 L3 10M
- OR**
- B) What is linked list? Write and explain the algorithm for create and
traverse operations in single linked list with example. CO5 L2 10M