



R22 Regulation

Subject code:4E1AJ

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech I Semester Supplementary Examinations, July 2025

C PROGRAMMING FOR PROBLEM SOLVING

(Common to *EEE, ECE, CSE, CSE(AI&ML) & CSE(DS)*)

Maximum Marks: 60

Date: 18.07.2025

Duration: 3 hours

- Note: 1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	BTL
1 a	Name the primitive data types.	1M	1	L1
b	Write the syntax of "nested if".	1M	1	L1
c	How do you initialize a two-dimensional array?	1M	2	L1
d	Define stack.	1M	2	L1
e	Define pointer.	1M	3	L1
f	Define String.	1M	3	L1
g	Define Structure.	1M	4	L1
h	Write the syntax of Union.	1M	4	L1
i	How does an append mode is different from a write mode?	1M	5	L1
j	What is a stream in C?	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	a) Discuss different computer languages with examples. b) Explain arithmetic, logical and bitwise operators with examples.	5M 5M	1	L2
OR				
3	a) What is a library function? What are its uses in C programming? b) Explain about different repetitive statements with examples.	5M 5M	1	L2
4	a) Define an array. What are its types? How are array elements stored and accessed? Explain with an example. b) Write a C program that implements linear search.	5M 5M	2	L2
OR				
5	a) Write a program to implement enqueue and dequeue operations. b) Write a C program to generate Fibonacci series using recursive functions.	5M 5M	2	L2
6	a) Differentiate malloc () and calloc () with example. b) Write a program in C to swap two numbers using pointers?	5M 5M	3	L2
OR				
7	a) Write a program to find given string is palindrome or not.	5M	3	L2

	b) Explain about different string manipulation functions with examples.	5M		
8	a) Compare and contrast structure with union with suitable examples. b) Differentiate between array of structures and array of pointers to structures with suitable diagrams.	5M 5M	4	L2
OR				
9	a) Define a structure. Describe how to declare and initialize structure and its members with an example. b) Why do we need to create self-referential structures in C programming? Explain with an example program.	5M 5M	4	L2
10	a) Discuss file input /output functions b) Illustrate the following file handling functions in C programming i) fopen() ii) fseek() iii) fwrite()	5M 5M	5	L2
OR				
11	a) Write a C program to display contents of a text file on console. b) Differentiate between text and binary files with an example.	5M 5M	5	L2