R22 Regulation *Subject code:4B1AM*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech I Semester Supplementary Examinations, June 2026

PROBLEM SOLVING USING C PROGRAMMING

(IT)

Maximum Marks: 60 Date: 23.06.2026 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	Distinguish between an algorithm and a flowchart.	1M	1	L1
b	What is the purpose of scanf() and printf() statement ?	1M	1	L1
c	Analyze Increment Operators with an example.	1M	2	L1
d	Write the syntax for array initialization.	1M	2	L1
e	What is function prototype?	1M	3	L1
f	What is the role of **strrev( )** function?	1M	3	L1
g	How to declaring and initializing pointers.	1M	4	L1
h	Define unions in C with syntax.	1M	4	L1
i	What is File inclusion?	1M	5	L1
j	How does an append mode differs from a write mode?	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	Describe in detail about Program development cycle with neat sketch.	10M	1	L2
	OR			
3	Write a short note on basic data types that the C language support. Illustrate with a C program.	10M	1	L2
4	Write the syntax of 'Switch' statement in C programming with example program. Mention the importance of 'default' case and 'break' statement.	10M	2	L2
	OR			
5	What is an array? Explain different types of arrays with an example program.	10M	2	L2
6	What is function? Explain different classification of user defined functions based on parameter passing and return type with examples.	10M	3	L2
	OR			
7	Explain about various string handling functions with an example program.	10M	3	L2

8	Distinguish between an array of structures and an array within a structure. Give an example each.	10M	4	L2
	OR			
9	Differentiate between a structure and union with respective allocation of memory by the compiler. Given an example of each.	10M	4	L2
10	How **feof()** be utilized within a program that updates an unformatted data file? Explain in detail?	10M	5	L2
	OR			
11	Write the syntax for opening a file with various modes and closing a file.	10M	5	L2