



R22 Regulation

Subject code:4B1AM

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech I Semester Supplementary Examinations, January 2026 PROBLEM SOLVING USING C PROGRAMMING (IT)

Maximum Marks: 60

Date: 19.01.2026

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	Explain in detail about Pass by Value and Pass by reference with 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 programs.	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